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ABSTRACT

While the continuing wage gap between men and women, Whites and non-Whites has been well documented, the purpose of this study was to examine the role which discrimination on the basis of race/ethnicity as well as sex plays in the setting of wages. Whether pay equity is an effective means of remedying race-based wage discrimination was also explored. A study by the Memphis State University (Tennessee) Center for Research on Women indicates that non-Whites were under-compensated for the work they performed. This wage dissimilarity was also reflected in an occupational dissimilarity between sexes and races. Occupations were examined according to the concentrations of specific groups within them, and average earnings by the percentage of specific groups in that occupation. The impact of education and experience on the hypothetical implementation of pay equity was reviewed. Pay equity for Blacks and Hispanics in New York State government employment was looked at by the Center for Women in Government, Rockefeller College, State University of New York, and revealed that job titles held by Black and Hispanic women were the most undervalued. A study by the University of Washington (Seattle) showed that regardless of the statistical mode used females and Black males were paid less for similar jobs even when other factors were taken into account. This study illustrated that while pay equity was a solution to race and sex based discrimination, the finding that wage differentials were tied to the job category pointed to a different set of issues: those of job segregation. The Service Employees International Union (SEIU), AFL-CIO, investigated race and sex discrimination in Los Angeles County employment policies and documented patterns of segregation on the basis of race and sex which perpetuate wage discrimination. The document contains 34 tables, 8 figures, and 9 appendixes providing data which support the findings of the National Committee on Pay Equity and the three case studies. References are also given. (PPB)

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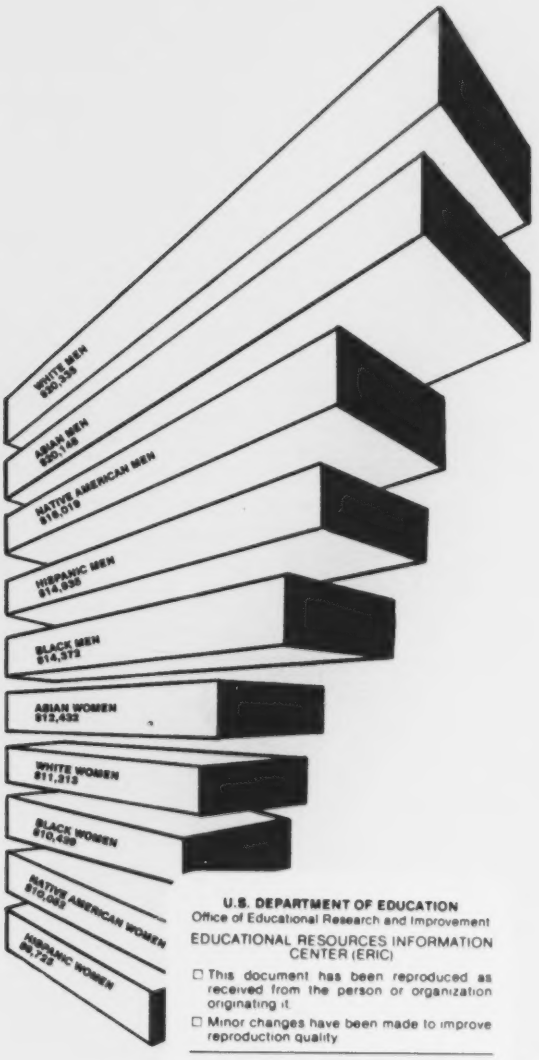
Pay Equity
An Issue Of Race, Ethnicity *And* Sex



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National Committee On Pay Equity

February, 1987

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NATIONAL COMMITTEE ON PAY EQUITY

The National Committee on Pay Equity is the only national coalition working to end race- and sex-based wage discrimination and to achieve equitable pay for all workers.

The Committee was formed in 1979 and today its membership is comprised of individuals and more than 90 organizations--international labor unions, major women's and civil rights groups, professional and legal associations, and state and local government agencies--representing millions of pay equity advocates nationwide. The National Committee on Pay Equity provides leadership, coordination, and strategy direction to members, policy makers, the media, and the general public. The Committee also works to stimulate new pay equity activities and to focus local and national attention on the issue.

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The Center for Research on Women at Memphis State University was established in 1982. Its mission is to conduct, disseminate, and promote research in the field of women's studies with specific focus on southern women and women of color nationwide.

The Center for Women in Government is a unit of the Institute for Government and Policy Studies at Rockefeller College, State University of New York at Albany. Its activities include research, training, technical assistance, public education, and the implementation of responsible civil service reform.

The Equal Employment and Affirmative Action Office and the Women's Information Center of the University of Washington, as part of the affirmative action goals of promoting equal access and opportunities for women, have followed comparable worth issues since they became a concern of the State. This project is part of that on-going process.

The Service Employees International Union (SEIU), AFL-CIO, represents some 850,000 workers across the United States and Canada. SEIU members--more than half of whom are women--work in healthcare, building maintenance and public employment.

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INTRODUCTION

The continuing wage gap between men and women, Whites and people of color (1) has been well documented. Recent statistics from the U.S. Census Bureau show that White women employed full-time, year-round in 1985 earned 63 cents for every dollar earned by White men. For women of color, the gap was even greater: Black women were paid 56 cents and Hispanic women, 53 cents. Men of color did only slightly better than women: the amount for Black men was 73 cents and for Hispanic men, 72 cents. (2) (These statistics are not available for Asians and Native Americans.)

A great deal of research has examined the reasons behind the wage gap between men and women, which has persisted despite the passage of the Equal Pay Act of 1963 and Title VII of the Civil Rights Act of 1964. It has been convincingly demonstrated that the single most important cause of the wage gap between the sexes is the concentration of women in a narrow range of low-paying, sex-segregated occupations. Part of the wage gap between men's and women's jobs can be attributed to differences in education, experience, or the number of years spent working. However, most of the wage gap can be attributed to sex discrimination. As the

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1 "People of color" is the term we use to collectively describe Blacks, Asians, Hispanics, and Native Americans. Other sections of this report will refer to these groups as "racial/ethnic minorities" and will also identify which specific groups are included in their research.

2 We use annual statistics rather than weekly or hourly statistics because weekly and hourly data can introduce distortions due to multiple job holding and overtime, part-time, and seasonal employment.

landmark study by the National Academy of Sciences (NAS), Women, Work and Wages, concluded, the higher the percentage of women in a job, the lower is the wage for the job (Treiman, Hartmann, 1981).

Similar research has not been conducted to examine the correlation between racial segregation in occupations and the low wages paid to people of color. The purpose of this study is to examine the role which discrimination on the basis of race/ethnicity--as well as sex--plays in the setting of wages. Additionally, we will explore whether pay equity is an effective means of remedying race-based wage discrimination.

Pay equity, also known as comparable worth, is a means of eliminating sex and race discrimination from the wage-setting process. (We use the term "pay equity" in this report.) It addresses the fact of pervasive occupational segregation in our society--that women and men, Whites and people of color do different jobs. While pay equity does include "equal pay for equal work," which was mandated by the Equal Pay Act, it goes a step further. The strategy requires that individual employers not pay their workers based on race or sex but rather based on the skill, effort, responsibility, and working conditions of the job--whether the job is the same or different.

The National Committee on Pay Equity (3) and other proponents of pay equity contend that work performed by White women and people of color is undervalued. We believe that current

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(3) The National Committee on Pay Equity is a coalition of labor, women's, and civil rights groups.

compensation systems contain biases against these groups and that their wages are lower as a result. Studies consistently show a wage gap between men and women of approximately 40%. The figure for women of color is higher. Opponents of pay equity claim that factors like education, experience, and labor force commitment fully account for the differences in men's and women's wages. However, the facts prove otherwise. Currently, men and women, on the average, have the same educational level, 12.8 years. Additionally, research has shown that in 1979 labor force experience, interruption, and education accounted for only 14% of the difference (U.S. Bureau of Census, 1984). Advocates of pay equity believe that the remainder of the gap is due to discrimination.

In order to correct this problem, pay equity proponents do not advocate, as some mistakenly believe, that there should be a national wage setting board. Nor do we seek to reduce men's wages to achieve pay equity; penalizing one group is no remedy for discrimination against another. Instead, each employer must look at his/her own workplace to determine if non-job-related factors are affecting the wage-setting process. If they are, employers must raise the pay of those jobs found to be undervalued. The employer's determination of job worth must be based on job content factors, not the race or sex of the worker.

Just how is "worth" decided? By employers. All employers set the wages of their employees, whether they do it systematically or arbitrarily, by formal analyses or informal traditions, unilaterally or through collective bargaining. In an

effort to make the wage setting process more rational some employers have been comparing and evaluating jobs for at least the last hundred years. The federal government established the first formal "job evaluation" system in 1871 (Treiman, 1979: p. 1). During World War II, this wage-setting practice became widespread in the private sector. An estimated two-thirds of all employees currently work in firms where job evaluations are used.

Although there are several different job evaluation methods, they all share a common goal: to provide a consistent pay-setting process by rank ordering jobs within one employment setting. The employer decides which factors are valuable to that particular organization. A trucking company, for example, would probably have different job ranking priorities than a hospital. These "job content" factors usually include knowledge or skill required, level of supervision or degree of authority (responsibility), and working conditions. After the employer has ranked jobs using these factors, pay is set accordingly.

Pay equity proponents advocate the use of such job evaluation systems--carefully examined and made free of racial, sexual, or ethnic bias--to set the pay of all positions within an individual employer's workforce. Thus, pay equity means paying all of an employer's workers according to the same standards--based on skill, effort, responsibility, and working conditions--ascertained through a method free of invidious discrimination.

Despite the fact that the first pay equity claims were race-based wage discrimination cases (4), pay equity has primarily been seen as a remedy for sex-based wage discrimination. Few pay equity studies have begun with the intention of looking for both race and sex discrimination in compensation systems. In fact, of the 16 states in the U.S. that have begun to implement pay equity, only three--New York, New Jersey, and Wisconsin--have specifically included race as well as sex. Thus, pay equity has generally corrected race-based wage discrimination only when people of color work in predominantly female jobs. Now there is a growing movement to look at both race- and sex-based wage discrimination.

The need for research in this area is clear. While many people believe that race-based wage discrimination is widespread and that implementation of pay equity would increase the wages of people of color, very little research has actually been done on this subject. It is important, for example, to know the occupations in which people of color predominate. Employers with fewer than fifteen employees are exempt from the protections of Title VII of the Civil Rights Act, the federal law that forbids employment discrimination on the basis of race, sex, national origin, religion, and color. Consequently, private household workers, an occupation that we know has a large concentration of women of color, are unlikely to be directly affected by pay

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(4) See Quarles v. Phillip Morris, Inc, 279 F.Supp. 505, 1 FEP 260 (E.D. Va. 1968). More recent cases include: Liberles v. County of Cook, 709 F.2d 1122 (7th Cir. 1983) and Bazemore v. Friday, U.S. Supreme Court, Nos. 85-93 and 85-428, 7/1/86.

equity, because they do not enjoy legal protections against discrimination and because job evaluation studies are not practical for an employer with only one or two employees.

In addition, we need to know whether people of color are already being paid according to the skill, effort, responsibility, and working conditions of the jobs they perform or whether their wages are based on other non-job-related factors, as we suspect. Are people of color being paid the same as White males in jobs with comparable requirements? If not, we need to know if paying people of color based on the skill, effort, responsibility, and working conditions required for the jobs they perform would actually increase their wages significantly.

Although much more research on the issue of people of color and pay equity is needed, this study begins to answer those questions by examining occupational segregation in the U.S. workforce and focusing on three case studies of wage setting systems in localities at different stages of pay equity implementation.

The first chapter of this volume, authored by the Memphis State University Center for Research on Women, sets the stage for our inquiry by pinpointing where people of color are in the workforce. It provides a national overview of occupational segregation for Black, Hispanic, Native American, Asian, and White men and women. It also looks at the relative wages in these occupations and presents data that suggests that the main

predictors of wage levels for White males are associated with lower salaries for people of color and White women.

Because job content information (such as skill, effort, responsibility, and working conditions) regarding jobs held by U.S. workers is not available on a national level, the researchers construct a hypothetical model based on education and experience factors to assess whether these factors are applied discriminatorily in the setting of wages for people of color. Since opponents of pay equity often claim that the wage gap can be explained by external factors such as education and experience rather than by discrimination, it is interesting to compare the pay levels of White women and people of color to those of White males apparently equal in education and experience. While this analysis is not a pay equity study, because it is a comparison based on human capital factors rather than job content factors, it is useful in showing that White women and people of color are undercompensated in terms of these external factors as well, and thus strengthening the inference that discrimination is a significant cause of the wage gap.

Following the national overview, Chapters Two through Four present case studies of three jurisdictions which have reviewed the effect of race and sex in the wage-setting process--New York State, Washington State, and Los Angeles County. Each of these chapters demonstrates a different approach for determining race and sex discrimination in wage-setting and also shows the effect pay equity would have on three distinct populations.

In Chapter Two, the Center for Women in Government presents the findings of its job evaluation study of the New York

State workforce--the first state study to include both race and sex. This section examines the relationship between the State's compensation system and the race/ethnic segregation in its workforce, and reports the effects of pay equity reforms.

Chapter Three presents an analysis designed to determine if race, ethnicity, and sex affect the wages of people of color in Washington State. Using census data, State-conducted wage surveys, and comparable worth points from previous pay equity studies, Helen Remick, Angela Ginorio, and Patricia Britz of the University of Washington conducted a county-by-county analysis of wages for a sample of the State's population.

Chapter Four focuses on Los Angeles County. The Service Employees International Union (SEIU), which filed a lawsuit against the County for discriminatory wages, looks at both occupational segregation and discriminatory promotion practices by this employer. Utilizing information from the Minnesota Department of Employee Relations and Los Angeles County's own employment data, SEIU uses a procedure called "job matching" to pinpoint undervaluation of jobs held by women and people of color as well as other discriminatory employment practices in the County.

Finally, Chapter Five presents the conclusions from these four studies as well as the National Committee on Pay Equity's recommendations for future action.

Eliminating wage discrimination is only one of the remedies necessary for achieving true equality for people of color and White women in this country. This is especially true for people

of color, who have a high rate of both unemployment and intermittent employment, and who are located in the lowest-paying occupations in our society. Educational opportunities, job training, and aggressive affirmative action programs are needed to open access for people of color to all jobs. While pay equity is not the total answer, we, nevertheless, conclude it is a significant step toward closing the wage gap.

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CHAPTER I

Race and Gender in Occupational Segregation

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CHAPTER SUMMARY

The Memphis State University Center for Research on Women used census data to determine if there is any relationship between occupational segregation in the U.S. workforce and the low wages paid to people of color. Their results strongly indicated that people of color are undercompensated for the work they perform. The study also provided strong evidence of discrimination as a factor in wage setting and suggests that implementation of pay equity would be an effective remedy.

The study began with a review of the literature and its deficiencies with respect to analysis of racial/ethnic wage discrimination. This is followed by an explanation of the study itself, the major findings of which can be summarized as follows.

On the average, women of color and White women work in occupations that are two-thirds female. However, while women of color are generally employed in female-dominated occupations, they are further segregated into occupations dominated by women of color. Men of color likewise are segregated from White women and men. The occupational dissimilarity is greater between men of color and White women than between White men and men of color. Asian men differ from most other people of color because they have high concentrations in both the high-paying occupations and the low-paying ones. Their historical immigration patterns and the diversity of groups which are categorized as Asian may explain this distribution in the labor force.

Differences in degrees of occupational concentrations are important because wages in the occupations where people of color

are employed are significantly lower than those for White men. Occupations with high concentrations of women of color are the lowest paid of all occupations. On the average, Black, Hispanic, Native American, and Asian men, earn less than White men.

The hypothetical model constructed by the researchers based on education and experience predicted that women and men of all races would benefit considerably from implementation of wage adjustments which rewarded these factors among people of color and White women in the same manner they are rewarded for White males. The lowest paid women would benefit the most: Black women (37.8%), Latina women (35.6%), and Native American women (35.9%) gain slightly more than White women (30.8%), and Asian women (29.6%). White men benefit slightly (5.5%) due to the few White men working in female-dominated or minority-dominated occupations. Black men would gain 13.2%, Latino men 10.4%, Native American men 8.7%, and Asian men 5.7%.

CHAPTER I

Race and Gender in Occupational Segregation

Center for Research on Women
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RACE AND GENDER IN OCCUPATIONAL SEGREGATION

THEMES IN RESEARCH ON RACE AND PAY EQUITY

The effort to examine the interaction of both race- and sex-based wage discrimination is a relatively new one. Traditionally the research literature on occupational segregation and race has been limited to males only, a pattern which continues even in very recent studies (Freeman, 1973; Welch, 1973; Smith and Welch, 1977; Reich, 1981; Kaufman, 1983). Research on gender segregation in the workplace has been more consistent in considering racial differences, but even in these studies the differences between Black men and women are sometimes treated mainly as a replication of differences between White men and women.

The developing body of literature on women and work that examines the specific situations of women of color (Black, Asian, Latina, and Native American) and the broader, more theoretical analysis of the omission of women of color from important research on women have provided the greatest opportunity for focusing upon the dual impact of race and gender on a variety of occupational and wage issues (c.f., Baca Zinn et al., 1986; Cooney, 1980; Glenn, 1984; Higginbotham, 1986; Ruiz, 1984; Segura, 1984; Simms and Malveaux, 1986; Zavella, 1982). Gradually, discussions of work done by women of color have begun to assess the applicability of wage improvement strategies designed to enhance the overall positions of women in the labor market and to decrease the wage gap between women and men. Within this framework, there is the beginning of discussion of the implications of pay equity for both women and men of color.

Race and Sex Discrimination Similarities

Several major themes characterize this small body of literature on race and pay equity. The first theme highlights similarities between race and sex discrimination and rests on the assumption that parallel processes produce a wage gap for both women and people of color. For example, the fact that both women and people of color have historically worked in labor markets that are segregated by race in addition to sex is seen as a major reason why women of color earn even less than White women. The National Institute for Women of Color, in a fact sheet jointly published with the National Committee on Pay Equity (1984), argued that the issue of pay equity is more important for women of color than White women because the former have the lowest wages of all race-sex groups. The acknowledgement of parallels between race and sex discrimination has been one of the major factors leading some writers to assume that pay equity, as a wage improvement strategy, would have important implications for people of color, especially women.

Do Women of Color Gain by Pay Equity?

Will pay equity address the major employment problems of women of color? Will it benefit White women more than women of color? These questions comprise the second theme which appears in this new literature on race and pay equity. Judy Scales-Trent (1984) and Julianne Malveaux (1984) address these questions directly by examining the impact of pay equity on Black women. Scales-Trent identifies three problems that

characterize the employment situations of Black women workers, distinguishing them from White women. The first is unemployment. The second is intermittent employment, and the third is a high concentration in marginal jobs. In all three of these areas, rates for Black women are significantly higher than for White women. Since pay equity reforms focus upon employed women, and those in full-time, year-round jobs, a sizeable group of Black women will not, in her opinion, benefit from such reforms.

However, Scales-Trent also points out a number of ways in which the job structures of Black and White women have begun to converge and argues that it is in this area of convergence that Black women are likely to benefit from pay equity policies.

Malveaux examines this issue in even greater detail, pointing out both similarities and differences in the occupational patterns of Black and White women. She notes that "within occupational categories there are differences in the status of Black and White women. Among clerical workers, Black women are more likely to be found as file clerks, typists, calculating machine operators and social welfare clerical assistants" (Malveaux, 1986, pp. 7-8), all of which are paid below the median clerical wage. Similar comparisons are made for service workers and professionals. She concludes that the impact of pay equity on Black women workers will be mixed; it will benefit some and not others. She states:

> To the extent that Black women work in typically female clerical jobs that are underpaid, and to the extent that relatively more Black than White women work in the government sector, the implementation of comparable worth settlements and decisions is likely to benefit them (1984, p. 141).

What Scales-Trent and Malveaux point out is that race-based wage discrimination has different characteristics than sex-based wage discrimination although there are many parallels and areas of overlap. These conclusions are consistent with other research on differences in income by race which suggests that "the process resulting in race differentials is somewhat different from that resulting in sex differentials" (Treiman and Hartmann, 1981: p.14). The circumstances of Black women suggest that the pattern for other women of color may also be mixed. Pay equity reforms are more likely to benefit those women of color whose occupational patterns are similar to those of White women and to bypass the ones who are unemployed, in temporary jobs or concentrated in low-skill, marginal jobs.

Pay Equity and Men of Color

The third theme in the literature on pay equity and race focuses on potential benefits and/or costs of pay equity initiatives for men of color. Opponents of pay equity have argued that White women will benefit at the expense of minority men and male blue-collar workers. For example, Michael J. Horowitz, counsel to the Director of the Office of Management and Budget for the Reagan Administration, has said: "There is nothing the Reagan Administration has done that holds as much long-term

threat to the Black community as comparable worth. The maintenance man will be paid less so that the librarian can be paid more" (cited in Scales-Trent, 1984, p. 56).

In response to this attack, Scales-Trent and Malveaux argue that pay equity will benefit Black men, though not in the same ways as Black women. Scales-Trent points out that the current employment patterns of Black men do not fit the pay equity paradigm which she defines as based upon the following factors: employment, job stability, occupational segregation by class membership, low wages, jobs that have intrinsic value to the employer and jobs for which there has been some investment in training. Nevertheless, she argues that the theory is "fully available to Black workers alleging race discrimination" and she speculates that it could also be used where Black men and women are concentrated in a job category which is devalued due to the race of the incumbents (p.54). (1) Malveaux (1986) identifies three ways Black men will benefit from pay equity. They are: (1) higher Black family wages when Black women earn equitable pay; (2) higher wages for Black men because they are more likely than White men to hold "typically female" jobs in which pay would be adjusted; and (3) the implementation of a "single, neutral" job evaluation process that is likely to weed out systematic racial bias in the process of eliminating

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(1) Editor's note: In fact, the first comparable worth lawsuits were race-based wage discrimination cases.
See citations on pg. 5 of this volume.

systematic gender bias. She concludes:

> Comparable worth helps ALL workers by ensuring that jobs of comparable value are paid equally. Further, no comparable worth system has been implemented by taking money from one set of workers to pay other workers....[M]ost comparable worth wage agreements call for a raise for all workers and a lump sum to make "comparable worth adjustments" for those workers who are not fairly compensated (1984, p.10-11).

It is apparent from this review that the study of pay equity and race is just beginning. Many of the arguments are based on analyses of the overall occupational position of Whites and Blacks. We are unaware of any specific discussion of the issue with regard to Latinos, Asians and Native Americans, with the exception of a single article by Denise Segura (1984) on Chicanas (Mexican American women). Segura identifies the differential effect of racial and gender stratification on Chicanas. She concludes that racial barriers impede access to professional and managerial jobs and that gender produces a wage gap at all levels. Although we may speculate that the potential impact of pay equity on these groups will be similar to that for Blacks, the entire subject requires systematic empirical analysis in order to address fully these questions and to confirm or refute the trends suggested in the literature.

THIS STUDY

This study addresses three broad questions in an attempt to understand the wage gap between people of color and Whites. They are:

1. Are people of color segregated into a few occupational categories? In which categories are they concentrated? How do the patterns of occupational segregation for women of color parallel or diverge from that of White women? How do women of color differ from men of color in their occupational distribution?
2. Is occupational segregation related to the low earnings of people of color? Stated otherwise, are some occupations with high concentrations of people of color systematically undervalued?
3. Is there discriminatory application of the wages assigned due to education and experience? If these factors were rewarded in the same manner for all people, would people of color benefit?

In order to address these questions, we analyzed data from the 1980 United States census, 5% Public Use Sample. (2) Our analysis of occupational segregation is based upon data from the employed civilian labor force. In the section on earnings, we analyze 1979 earnings of employed persons who worked full-time year-round in 1979. Throughout the analysis we divide the sample

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(2) The 5% Public Use Sample is a sample of the whole national census.

into ten groups. (Table 1 shows the percentage distribution of each group in the labor force.) We first identify Latinos from the census "Spanish origin" code. We divide the remaining sample into four groups based on the race code: Whites, Blacks, American Indians, and Asian and Pacific Islanders. Each group is then divided by sex.

Table 1. Percentage Distribution in the Labor Force by Race and Gender.

	% Labor Force	Sample Size
Black Women	4.48	205,408
Latina Women	2.14	98,270
Asian Women	.76	34,759
Native American Women	.21	9,708
White Women	34.97	1,603,507
Black Men	4.44	203,643
Latino Men	3.24	148,864
Asian Men	.88	40,111
Native American Men	.28	13,008
White Men	48.58	2,227,002

OCCUPATIONAL SEGREGATION

Women of color and White women, on the average, work in occupations where more than two-thirds of the workers are women. However, White women are not concentrated in the same occupational categories as women of color.

In 1980, the average White woman worked in an occupation that was 68% female. Women of color, likewise, work in predominantly female occupations: Black women work in occupations that are 68% female; Latina women, 67% female; Asian women, 67% female; and Native American women 67% female (see Table 2 for complete details).

Table 2. Average occupational characteristics

	% of occupation Female	% of occupation People of color
Black Women	68.0%	23.3%
Latina Women	67.1%	22.5%
Asian Women	67.6%	18.9%
Native American Women	66.5%	19.7%
White Women	68.2%	16.6%
Black Men	26.7%	20.6%
Latino Men	25.7%	19.6%
Asian Men	31.2%	16.1%
Native American Men	20.9%	17.8%
White Men	23.1%	14.8%

These similar averages mask important differences between White women and women of color. Although White women and women of color may be equally concentrated into occupational categories with high percentages of female workers, they may also be segregated from each other into occupations predominated by White females or occupational categories with high percentages of women of color. For example, Table 3 demonstrates the concentration of all women into clerical positions and their virtual exclusion from skilled crafts and from driving occupations. Nevertheless, differences between White women and women of color are clear. Black and Native American women are more concentrated in service

occupations, Latina women as machine operators, and Asian women in service and technical occupations.

Table 3. Distributions across 14 broad occupational categories

Occupation	WOMEN White	Black	Latina	Asian	Native
Managers	7.89%	4.64%	4.68%	7.58%	6.73%
Professionals	14.98%	11.82%	7.54%	16.62%	10.76%
Supervisors	2.35%	2.13%	2.58%	1.99%	2.17%
Technicians	3.13%	3.31%	2.05%	4.66%	3.07%
Sales	11.29%	6.06%	8.75%	8.67%	7.95%
Clerical	31.21%	24.79%	26.73%	25.03%	26.06%
Skilled	1.56%	1.71%	2.95%	3.05%	2.70%
Machine opers.	8.00%	12.94%	17.85%	12.56%	10.07%
Drivers	0.84%	0.88%	0.73%	0.23%	1.22%
Laborers	2.00%	3.06%	4.12%	1.94%	2.92%
Police & Fire	0.36%	0.62%	0.32%	0.16%	0.58%
Other service	14.71%	23.00%	17.43%	15.76%	23.08%
Pvt. household	0.75%	4.53%	2.27%	0.89%	1.24%
Farming	0.93%	0.53%	1.99%	0.85%	1.45%
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%

Occupation	MEN White	Black	Latino	Asian	Native
Managers	13.63%	5.75%	6.46%	13.21%	7.78%
Professionals	11.67%	5.88%	5.46%	21.05%	6.68%
Supervisors	6.51%	4.48%	5.17%	4.12%	5.25%
Technicians	3.07%	1.87%	1.98%	6.15%	2.24%
Sales	8.75%	3.54%	5.05%	6.96%	3.87%
Clerical	5.49%	8.09%	6.34%	8.05%	4.29%
Skilled	17.10%	13.02%	17.37%	10.51%	21.59%
Machine opers.	9.22%	15.36%	15.17%	7.15%	10.91%
Drivers	7.07%	11.03%	7.60%	2.69%	9.51%
Laborers	5.88%	11.81%	10.42%	4.07%	10.00%
Police & fire	2.09%	3.01%	1.64%	1.07%	3.02%
Other service	5.47%	12.87%	10.84%	11.81%	8.87%
Pvt. household	0.03%	0.16%	0.07%	0.11%	0.05%
Farming	4.03%	3.13%	6.43%	3.05%	5.93%
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%

Thus, it is necessary to supplement analyses of gender segregation with an appreciation for the differences between Whites and people of color. What hurts (or benefits) White women is not necessarily the same as what hurts (or benefits) people of color. We need to be aware of the commonalities and the differences. It is best to consider each gender and racial/ethnic group as a distinct category in the labor market.

Segregation Indices

Another way to demonstrate the degree of occupational segregation between women of color and White men and then between women of color and White women is by the use of a statistic called the index of dissimilarity (D). This index describes the proportion of people in one group that would have to change jobs in order to have the same occupational distribution as the other group. For instance, among Whites, 61% of women (or men) would have to change occupations in order for women to have the same distribution of occupations as men.

Table 4 compares women's occupational distributions against the pattern set by White men. The first column shows that both women of color and White women are very segregated from White males. The amount of segregation is roughly equal, although women of color are slightly more segregated than are White women. The second column demonstrates that women of color are also segregated from White women. Approximately 28% of Black women would have to change occupations in order for the Black pattern to match the White pattern. This racial segregation is less than the gender segregation but it is still substantial.

These numbers confirm that both White women and women of color are segregated from White male occupations and that women of color are also segregated from White female occupations although not as severely as from White male occupations.

Table 4. Segregation Indexes

	Segregation from White Men	Segregation from White Women
White Women	60.73	.00
Black Women	65.09	28.34
Latina Women	63.27	24.05
Asian Women	63.20	21.35
Native American Women	61.02	20.63
White Men	.00	60.73
Black Men	32.06	60.08
Latino Men	26.70	60.14
Asian Men	29.31	54.93
Native American Men	25.22	63.88

Percent of people of color who would have to change jobs to equal White male and female occupational distributions.

Occupational Concentrations

A more detailed description of the differences in the jobs which people of color hold is provided in Tables 5a-5j. Here, an analysis of the 503 job categories listed in the 1980 census form the basis for lists of occupations with the highest concentrations of White women and men; Black women and men; Asian women and men; Latino women and men; and Native American women and men. These lists demonstrate clearly that White women are not segregated into the same jobs as women of color. For example, dental hygienists--although not a large occupation--consist overwhelmingly of White women (94%); few women of color are found in this occupation. By contrast, private household cleaners and servants are disproportionately Black women (49%), outnumbering White women (35%) despite their smaller share of the total labor force.

The difference is important. Dental hygienists earned an average of $13,368 in 1979, (above average for women), while private household cleaners and servants earned $5,086. Similarly sewing machine operators have disproportionately high concentrations of Latinas (13.5%) and Asian women (4.9%). Native American women are concentrated in child care work (only 1.1% of this occupation, but this is over five times their share of the labor force). All of these occupations are among the most poorly paid jobs in the labor force (sewing machine operators= $7,568; child care workers=$7,132). The occupational concentrations of men of color diverge sharply from those of White men and from all women. Black, Latino, and Native American men are concentrated in some of the lowest-paid blue-collar occupations.

Blacks for example, are concentrated as garbage collectors (30.4%), janitors (14.0%), and various laborers (12-14%). Latinos are concentrated as farmworkers (16.0%), groundskeepers, (11.8%) and various laborers (10.3%). Native Americans are concentrated in outdoor laboring occupations such as marine life workers (4.0%), forestry (3.5%), fishing (2.9%), and logging (1.8%). These distributions contrast with those of White males who predominate in highly paid professional occupations, like airplane pilots (95.5%) and various engineers (88-94.4%) and as supervisors in high-paid, blue-collar positions such as firefighters (93.9%), electricians (93.7%), and plumbers (93.6%).

The historical immigration patterns of Asian and the diversity of groups within this category are reflected in their bifurcated occupational distribution. Twenty-nine of the top forty occupations with the highest concentration of Asians are relatively high-paying scientific and professional positions such as various engineers (3.5-7.4%) and physicians (7.3%). In contrast eight of these fifty are service jobs such as cooks (4.6%), porters (4.7%), and groundskeepers (2.8%).

Table 5a. Lists of occupations with highest concentrations

Black Women

%of Black Women in occupation	code	occupation	size
49.41%	407	Private household	371
39.58%	404	Cooks, household	5
33.61%	405	Housekeepers	47
26.39%	467	Welfare aides	33
26.08%	747	Pressing machine	57
23.78%	449	Maids & Housemen	317
21.98%	447	Nursing aides	642
18.92%	403	Launderers	1
17.36%	97	Dietitians	25
17.16%	738	Winding & Twisting	40
16.28%	207	Licensed practical nurs	154
15.28%	377	Welfare clerks	8
14.87%	387	Teacher's aides	70
14.65%	748	Laundering machine	56
14.43%	439	Kitchen workers	33
14.38%	693	Adjusters	1
14.33%	385	Data-entry keyers	125
13.76%	315	Typists	222
13.36%	739	Knitting & weaving	21
13.35%	335	File clerks	84
13.33%	446	Health aides, other	84
13.07%	468	Child care workers	171
12.91%	174	Social workers	131
12.84%	469	Personal service	49
12.83%	744	Sewing machine	246
12.60%	348	Telephone operators	83
12.08%	155	Teachers, pre-k & kg	49
11.57%	347	Office machine, nec.*	8
11.24%	354	Postal clerks	66
10.55%	436	Cooks, exc. short order	302
10.39%	749	Misc, textile	33
10.28%	765	Folding	7
10.02%	425	Crossing guards	10
9.99%	326	Correspondence clerk	4
9.82%	674	Misc. precision appa	2
9.82	379	General office clerk	370
9.74%	328	Personnel clerks	17
9.60%	374	Scheduling clerks	8
9.60%	323	Information clerks	18
9.44%	344	Calculating	11
4.47%		TOTAL SAMPLE	10,000

*nec.= not elsewhere classified

Table 5b. Lists of occupations with highest concentrations

Latina Women

%of Latina Women in occupation	code	occupation	size
21.43%	488	Graders, agricultural	9
16.58%	405	Housekeepers	48
13.49%	744	Sewing machine	539
12.89%	683	Electrical assembler	66
10.50%	666	Dressmakers	47
10.07%	387	Teacher's aides	99
9.94%	799	Graders, exc. agric.	46
9.59%	693	Adjusters	1
9.46%	403	Launderers	1
9.43%	747	Pressing machine	43
9.27%	784	Solderers	14
9.20%	407	Private household	144
8.56%	674	Misc. precision appa	3
8.11%	888	Hand packers	221
8.04%	377	Welfare clerks	9
8.03%	798	Production samplers	3
7.92%	449	Maids and housemen	221
7.81%	467	Welfare aides	20
6.82%	748	Laundering machine	55
6.66%	468	Child care workers	182
6.64%	144	Language professor	3
6.58%	754	Packaging	35
6.25%	794	Hand grinding	1
6.12%	483	Marine life workers	0
6.06%	786	Hand cutting	5
5.91%	374	Scheduling clerks	11
5.78%	315	Typists	195
5.76%	795	Misc. hand working	6
5.41%	688	Good batchmakers	7
5.32%	385	Data-entry keyers	97
5.27%	319	Receptionists	132
5.15%	335	File clerks	68
5.07%	458	Hairdressers	127
4.94%	667	Tailors	14
4.93	406	Child care household	33
4.88%	146	Social work professor	0
4.78%	446	Health aides, other	63
4.78%	445	Dental assistants	35
4.69%	785	Assemblers	355
4.68%	276	Cashiers	364
21.4%		TOTAL SAMPLE	10,000

Table 5c. Lists of occupations with highest concentrations

Asian Women

%of Asian Women in occupation	code	occupation	size
8.16%	483	Marine life workers	1
6.60%	683	Electrical assembler	95
6.57%	666	Dressmakers	84
5.41%	403	Launderers	1
5.13%	673	Apparel patternmaker	3
4.89%	744	Sewing machine	553
4.03%	463	Guides	15
3.84%	203	Laboratory technician	124
3.36%	97	Dietitians	28
3.35%	385	Data-entry keyers	172
3.28%	95	Registered nurses	564
3.02%	674	Misc. precision appa	3
3.00%	83	Medical scientists	8
2.78%	193	Dancers	5
2.71%	84	Physicians	159
2.63%	168	Sociologists	1
2.53%	488	Graders, agricultural	3
2.45%	205	Health record techni	5
2.44%	146	Social work professo	0
2.41%	73	Chemists	33
2.27%	786	Hand cutting	5
2.27%	465	Public transp. attendants	20
2.21%	144	Language professor	3
2.19%	344	Calculating	16
2.15%	784	Solderers	9
2.09%	405	Housekeepers	17
2.08%	667	Tailors	16
2.06%	377	Welfare clerks	7
2.04%	328	Personnel clerks	20
2.04%	78	Biological scientist	13
2.01%	449	Maids & housemen	158
1.99%	345	Duplicating	5
1.99%	329	Library clerks	37
1.97%	67	Statisticians	8
1.85%	315	Typists	176
1.80%	438	Food counter	47
1.78%	435	Waiters & waitresses	344
1.77%	318	Transportation agent	24
1.77%	404	Cooks, household	1
1.75%	383	Bank tellers	117
0.76%		TOTAL SAMPLE	10,000

Table 5d. Lists of occupations with highest concentrations

Native American Women

%of Native American Women in occupation	code	occupation	size
1.17%	467	Welfare aides	31
1.07%	468	Child care workers	295
1.03%	387	Teachers' aides	103
1.02%	495	Forestry, exc. logging	12
.97%	316	Interviewers	66
.87%	739	Knitting & weaving	29
.83%	647	Jewelers	14
.83%	3	Legislators	4
.74%	666	Dressmakers	34
.73%	795	Misc. hand working	8
.72%	163	Counselors, education	68
.72%	683	Electrical assembler	37
.71%	447	Nursing aides	438
.71%	404	Cooks, household	2
.69%	784	Solderers	10
.69%	284	Auctioneers	2
.68%	693	Adjusters	1
.68%	449	Maids & housemen	192
.67%	228	Broadcast equipment	23
.67%	207	Licensed practical nurses	134
.66%	315	Typists	226
.63%	405	Housekeepers	19
.62%	317	Hotel clerks	19
.62%	748	Laundering machine	50
.61%	347	Office machine	9
.60%	147	Theology professor	1
.60%	346	Mail machine	2
.59%	445	Dental assistants	44
.58%	205	Health record techs	4
.57%	155	Teachers, pre-k 7 kg	49
.55%	348	Telephone operators	76
.55%	469	Personal service	44
.54%	377	Welfare clerks	6
.53%	436	Cooks, ex. short order	320
.51%	406	Child care household	34
.50%	674	Misc. precision appa	2
.50%	174	Social workers	107
.49%	434	Bartenders	71
.49%	328	Personnel clerks	18
.49%	753	Cementing & Gluing	8
0.21%		TOTAL SAMPLE	10,000

Table 5e. Lists of occupations with highest concentrations

White Women

%of White Women in occupation	code	occupation	size
94.32%	204	Dental hygienists	13
88.84%	313	Secretaries	1013
87.77%	445	Dental assistants	40
87.35%	99	Occupational therapists	4
84.26%	95	Registered nurses	314
82.97%	104	Speech therapists	10
82.70%	319	Receptionists	127
82.23%	337	Bookkeepers	441
82.14%	406	Child care household	33
81.52%	149	Home economics profs.	0
80.43%	134	Health professor	4
79.64%	435	Waiters & waitresses	333
79.32%	155	Teachers, pre-k & kg	41
79.16%	383	Bank tellers	115
77.50%	314	Stenographers	20
77.42%	339	Billing clerks	30
77.12%	205	Health record techs.	3
76.03	458	Hairdressers	117
75.52%	207	Licensed practical nurses	92
74.92%	315	Typists	155
74.77%	283	Demonstrators, sales	3
74.56%	353	Communications, nec.	2
74.24%	164	Librarians	40
74.02%	277	Street sales	42
73.49%	348	Telephone operators	62
72.52%	338	Payroll clerks	34
71.92%	384	Proofreaders	6
71.91%	264	Sales, apparel	74
71.61%	468	Child care workers	120
71.37%	328	Personnel clerks	15
70.98%	344	Calculating	11
70.76%	276	Cashiers	337
70.10%	336	Records clerks	26
69.72%	438	Food counter	40
69.33%	385	Data-entry keyers	77
69.17%	325	Classified-ad clerks	3
67.81%	329	Library clerks	28
67.45%	326	Correspondence clerk	4
67.16%	465	Public transp. attendants	13
66.88%	666	Dressmakers	18
34.98		TOTAL SAMPLE	10,000

Table 5f. Lists of occupations with highest concentrations

Black Men

%of Black men in occupation	code	occupation	size
31.49%	876	Stevedores	15
30.37%	875	Garbage collectors	47
29.44%	845	Longshore equipment	3
28.04%	466	Baggage porters	12
20.54%	588	Concrete finishers	33
19.26%	813	Parking lot attendant	14
19.09%	809	Taxicab drivers	76
17.25%	725	Misc. metal processing	6
15.99%	454	Elevator operators	7
15.16%	856	Industrial tractor	145
15.10%	887	Vehicle washers	47
14.67%	424	Correctional officer	28
14.64%	869	Construction laborer	251
14.49%	883	Stock handlers, nec.	146
14.24%	594	Paving equipment	2
14.16%	756	Mixing	35
14.02%	453	Janitors	626
13.89%	426	Guards	161
13.68%	584	Plasterers	9
13.16%	766	Furnace operators	44
13.16%	496	Logging	32
13.09%	563	Brickmasons	58
12.89%	849	Crane operators	37
12.86%	889	Laborers, exc. const.	381
12.50%	864	Helpers, mechanics	7
12.48%	357	Messengers	23
12.48%	768	Crushing & grinding	14
12.16%	808	Bus drivers	103
12.04%	366	Meter readers	11
11.91%	675	Hand molders	9
11.84%	763	Baking	2
11.68%	354	Postal clerks	69
11.25%	415	Supers, guard	6
11.23%	724	Heat treating equipt.	6
11.17%	764	Washing & cleaning	2
11.14%	804	Truck drivers, heavy	461
11.12%	749	Misc. textile	35
11.07%	599	Construction	35
10.99%	878	Machine feeders	27
10.91%	758	Compressing	6
4.44%		TOTALS	10,000

Table 5g. Lists of occupations with highest concentrations

Latino Men

%of Latino Men in occupation	code	occupation	size
16.04%	479	Farm workers	402
16.04%	477	Supers, farm	25
15.32%	454	Elevator operators	9
14.08%	588	Concrete finishers	31
13.83%	668	Upholsterers	29
13.40%	876	Stevedores	8
13.33%	845	Longshore equipment	2
13.28%	794	Hand grinding	1
13.06%	584	Plasterers	11
12.87%	484	Nursery workers	13
12.18%	813	Parking lot attendants	12
11.89%	723	Metal plating	16
11.79%	486	Groundskeepers	140
11.43%	647	Jewelers	13
11.04%	725	Misc. metal processing	5
11.03%	667	Tailors	20
11.00%	864	Helpers, mechanics	9
10.39%	867	Helpers, extractive	6
10.29%	869	Construction laborers	241
10.23%	865	Helpers, construction	37
9.67%	759	Painting	49
9.07%	675	Hand molders	10
9.05%	466	Baggage porters	5
9.03%	573	Drywall installers	26
9.02%	669	Shoe repairers	8
8.94%	873	Production helpers	31
8.85%	787	Hand molding	4
8.69%	579	Painter	104
8.61%	729	Nailing	1
8.46%	809	Taxicab drivers	46
8.39%	565	Tile setters	8
8.33%	814	Motor transp.	1
8.30%	553	Supers, masons	1
8.19%	856	Industrial tractor	107
8.19%	875	Garbage collectors	17
8.18%	887	Vehicle washers	35
8.08%	514	Automobile body repair	50
8.06%	443	Waiters' assistants	67
8.05%	566	Carpet installers	21
8.02%	615	Explosives workers	3
3.25%		TOTALS	10,000

Table 5h. Lists of occupations with highest concentrations

Asian Men

%of Asian Men in occupation	code	occupation	size
8.11%	124	Poli-sci professor	1
7.35%	49	Nuclear engineers	7
7.32%	116	Physics professor	4
7.27%	84	Physicians	370
6.11%	53	Civil engineers	143
5.48%	73	Chemists	65
5.47%	69	Physicists	14
5.14%	115	Chemistry professor	5
5.09%	48	Chemical engineers	34
5.07%	59	Engineers, nec.	146
4.90%	133	Medical professor	5
4.69%	466	Baggage porters	10
4.67%	44	Aerospace engineers	47
4.59%	404	Cooks, household	3
4.51%	45	Metallurgical enginr.	13
4.44%	845	Longshore equipment	2
4.42%	129	Computer professor	1
4.40%	55	Electrical engineer	166
4.13%	57	Mechanical Engineer	96
3.91%	794	Hand grinding	1
3.87%	463	Guides	12
3.66%	678	Appliance technicians	19
3.58%	235	Technicians, nec.	136
3.54%	83	Medical scientists	8
3.54%	54	Agricultural enginr.	2
3.52%	78	Biological scientists	19
3.31%	43	Architects	42
3.15%	213	Electrical technicians	95
3.08%	433	Supers. food service	84
2.94%	119	Economics professor	2
2.91%	96	Pharmacists	49
2.89%	66	Actuaries	3
2.79%	68	Mathematicians, nec	2
2.76%	229	Computer programmers	100
2.75%	486	Groundskeepers	121
2.70%	403	Launderers	0
2.68%	154	Professor, not spec	131
2.67%	64	Computer scientists	63
2.61%	128	Mathematics professor	5
2.58%	58	Marine architects	5
0.87%		TOTALS	10,000

Table 5i. Lists of occupations with highest concentrations

Native American Men

%of Native American Men in occupation	code	occupation	size
4.08%	483	Marine life workers	2
4.00%	499	Hunters	3
3.47%	495	Forestry, ex. logging	32
2.92%	498	Fishers	55
2.70%	654	Sheet metal apprentices	1
2.29%	3	Legislators	8
2.21%	494	Supers, forestry	7
1.87%	497	Officers, fishing	5
1.83%	496	Logging	70
1.62%	569	Carpenter apprentices	5
1.48%	594	Paving equipment	4
1.42%	867	Helpers, extractive	10
1.42%	848	Hoist operators	15
1.40%	506	Auto mechanic apprentice	2
1.39%	814	Motor transp., nec.	2
1.32%	614	Drillers, oil well	32
1.31%	647	Jewelers	17
1.29%	844	Operating engineers	106
1.29%	595	Roofers	55
1.28%	587	Plumber, apprentices	5
1.27%	136	Agriculture professor	2
1.27%	597	Structural metal workers	39
1.26%	599	Consturction, nec.	62
1.25%	864	Helpers, mechanics	12
1.13%	218	Surveying technicians	20
1.12%	727	Sawing	41
1.12%	616	Mining machine	32
1.11%	643	Boilermakers	15
1.10%	588	Concrete finishers	28
1.10%	79	Forestry scientists	13
1.08%	573	Drywall installers	36
1.05%	615	Explosives workers	4
1.03%	485	Supers, agricultural	8
1.03%	139	Education professor	1
1.02%	4	Chief execs, public	12
1.01%	556	Supers, painters	4
1.01%	674	Misc. precision apparel	3
1.00%	126	Social science professor	1
.98%	829	Sailors	11
.95%	617	Mining, nec.	15
0.28%		TOTALS	10,000

Table 5j. Lists of occupations with highest concentrations

White Men

%of White Men in occupation	code	occupation	size
95.46%	226	Airplane pilots	15
94.38%	258	Sales engineers	9
93.88%	413	Supers, firefighting	4
93.65%	555	Supers, electricians	7
93.58%	557	Supers, plumbers	3
93.36%	656	Patternmakers, wood	1
92.20%	613	Supers, extractive	16
92.19%	634	Tool & die makers	35
92.00%	828	Ship officers	6
91.86%	554	Supers, carpenters	7
91.84%	823	Railroad conductors	9
91.58%	509	Small engine repairers	7
91.21%	46	Mining engineers	2
90.67%	596	Duct installers	5
90.54%	47	Petroleum engineers	4
90.50%	635	Tool & die apprentice	1
90.49%	58	Marine architects	3
90.44%	494	Supers, forestry	2
90.35%	503	Supers, mechanics	30
90.35%	517	Farm equip mechanics	8
90.34%	57	Mechanical engineers	38
89.77%	558	Supers, const., nec.	126
89.61%	855	Grader operators	14
89.56%	544	Millwrights	25
89.32%	63	Surveyors	6
89.27%	534	Heating mechanics	27
89.18%	575	Electricians	110
89.11%	577	Elect. power install	19
88.86%	417	Firefighting	36
88.56%	87	Optometrists	5
88.44%	473	Farmers	199
88.41%	598	Drillers, earth	4
88.15%	597	Structural metal work	16
88.10%	516	Heavy equip mechanic	28
88.07%	44	Aerospace engineers	16
88.04%	614	Drillers, oil well	13
87.79%	45	Metallurgical engine	4
87.72%	414	Supers, police	9
87.71%	587	Plumber, apprentices	2
87.70%	543	Elevator repairers	4
48.58%		TOTAL SAMPLE	10,000

EARNINGS

It is well known that "women's jobs" pay less well than "men's jobs." In general, the greater the proportion of women in an occupation, the lower the average pay. The negative trend is unmistakable in Figure 1. Only one "male occupation" falls in the bottom third of earnings (kitchen workers); no "female occupation" makes it into the top third. (3) The trend line in Figure 1 shows that an occupation that is 100% female is estimated to pay only 50.4% of an occupation that is 100% male. (4)

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(3) The correlation across all 503 census occupation categories is substantial. Even holding constant other occupational characteristics (i.e. average education, age distribution, racial composition), percent female of an occupation is closely related to its average earnings (partial correlation=-.48).

(4) See Appendix 2 for log equation.

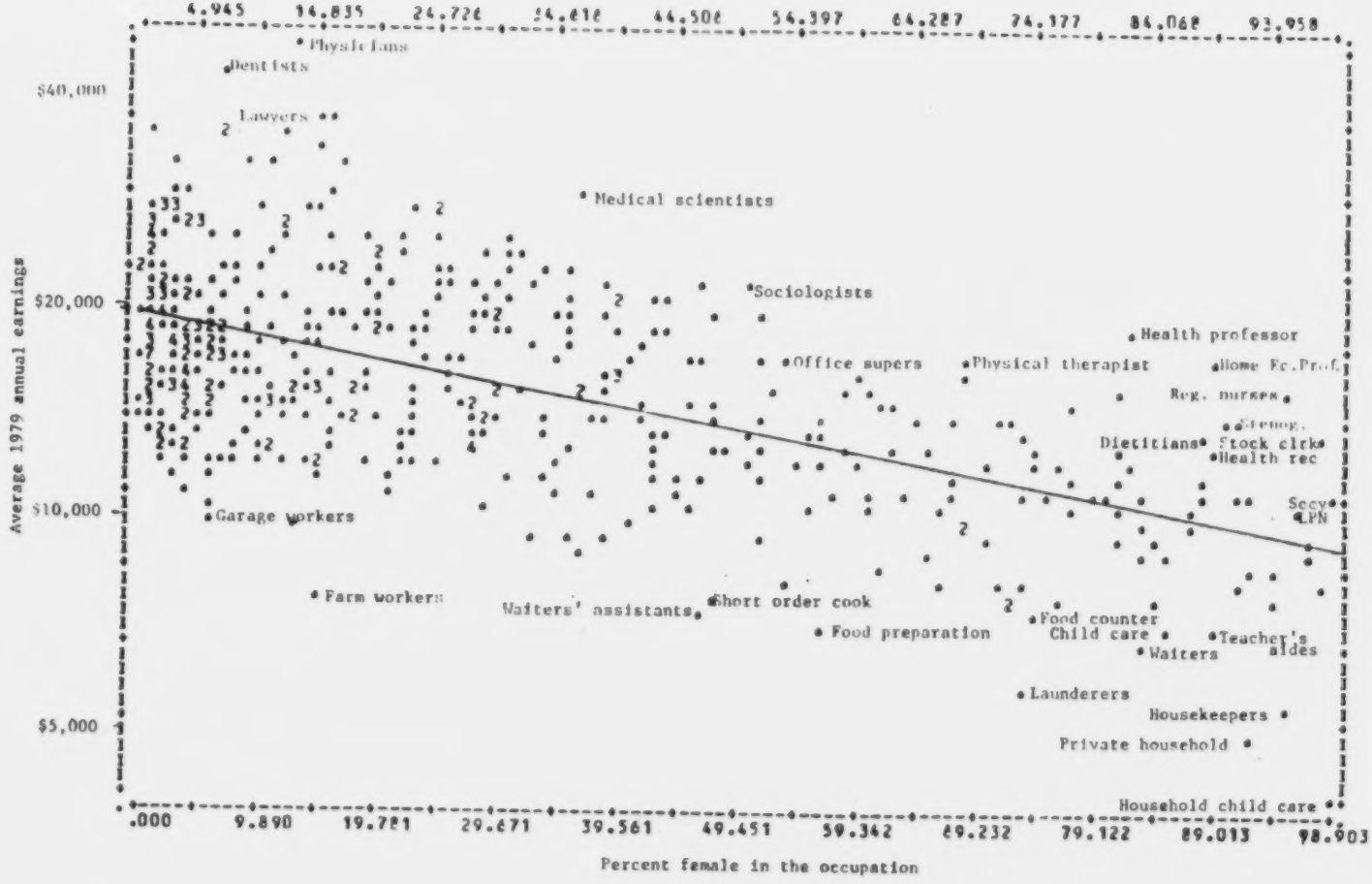

Figure 1. Scattergram of average earnings and percent female.

Occupations with high concentrations of women of color are the worst paid of all women's occupations. Figure 2 plots average earnings against the concentration of women of color. As we noted above, occupations with the highest percentages of women of color earn the lowest incomes (private household workers, housekeepers, launderers). (5) In general, the higher the percentage of women of color in an occupation, the closer the occupation is to the bottom of the earnings ladder. Any occupation with more than 15% Black, Latina, or Native American women has below average income. (6) The worst paid jobs are predominantly filled by these women.

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(5) Household child care workers are only a partial exception; this occupation ranks at the absolute bottom of the earnings scale but has a substantial proportion (83.9%) of White workers.

(6) The pattern of low earnings is common across concentrations of Black, Latina, and Native American women. (Since they often share the same occupations, this is not surprising.) The correlation of percent Black women and average earnings of an occupation is -.62; for Latina women, -.67; for Native American women, -.62).

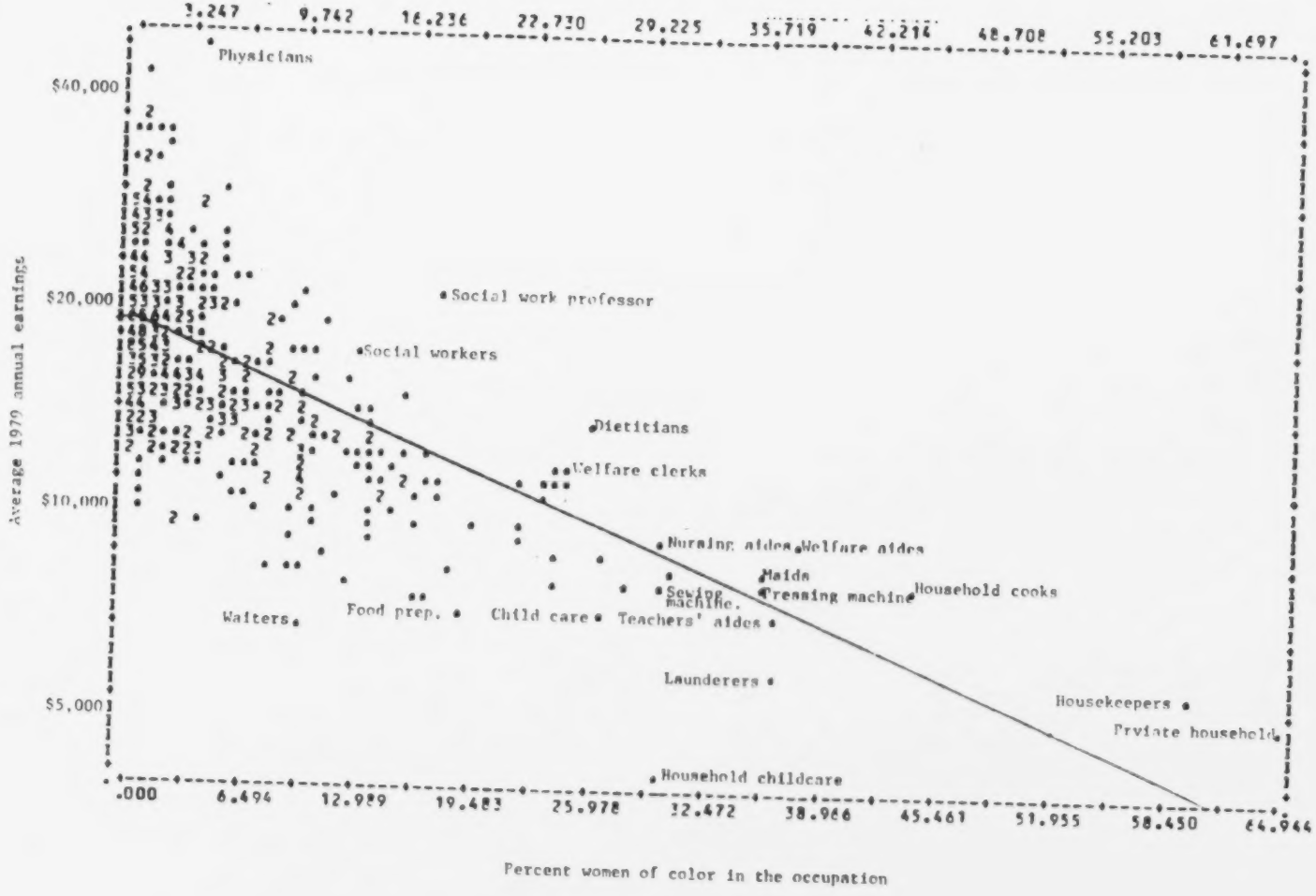

Figure 2. Scattergram of average earnings and percent women of color.

The pattern for White women appears somewhat different (see Figure 3). The occupations with the highest concentration of White women are low paid, but not among the lowest. (7)

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(7) The correlation is still substantially negative (-.57). Asian women have the lowest correlation (-.44). While still negative it is lower than the correlation for White women.

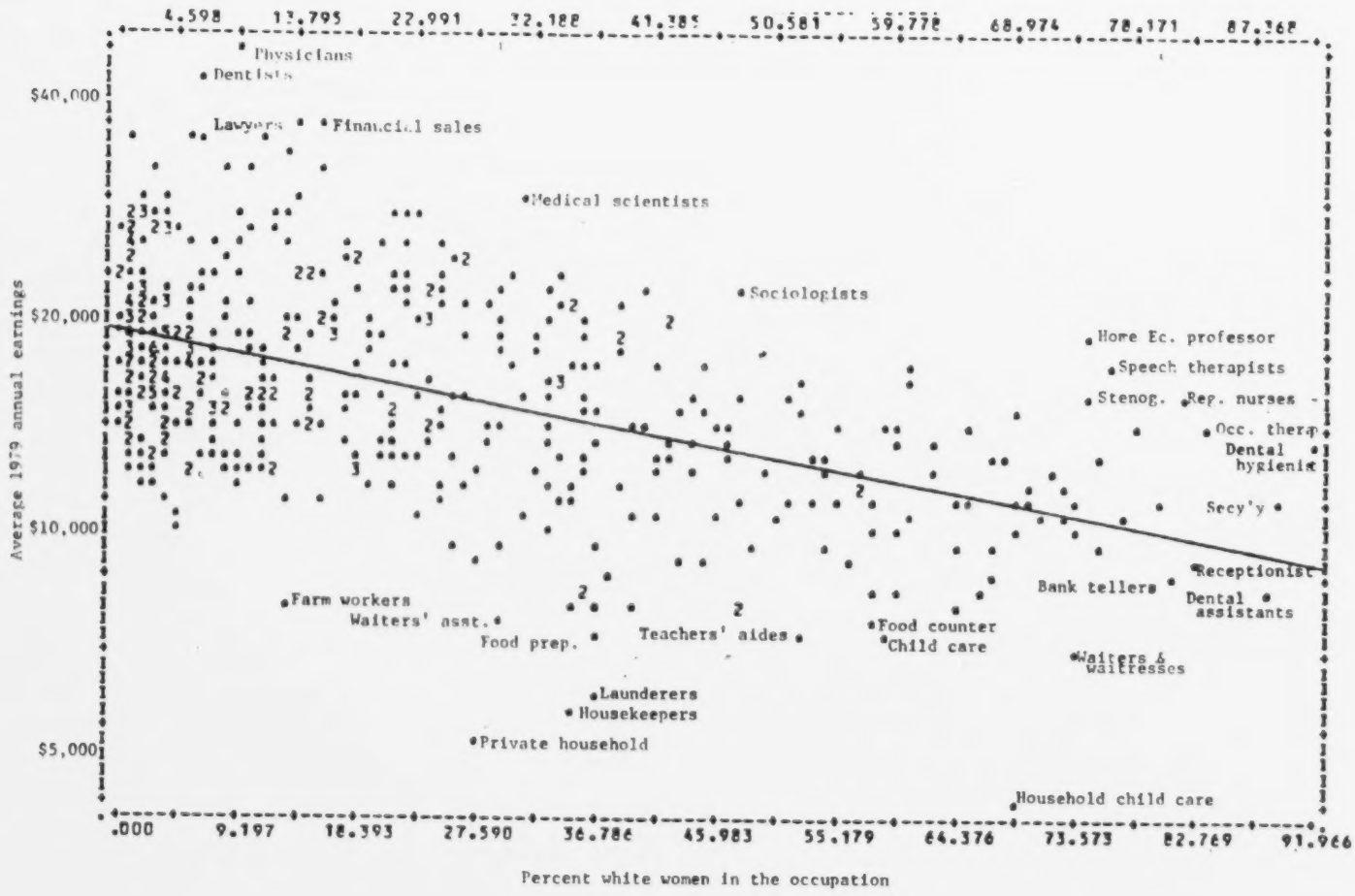

Figure 3. Scattergram of average earnings and percent White women.

IMPACT OF EDUCATION AND EXPERIENCE

Pay equity studies are based on job content factors and are performed on an individual employer's workforce. The results of these studies have consistently shown undercompensation of women as compared to men in comparable jobs. The case studies of New York State, Washington State, and Los Angeles County included in this volume can be added to a growing list of places where sex- and race-based undervaluation has been uncovered.

We wanted to perform an analysis to determine how implementation of pay equity would affect the wages of people of color on a national level. This presented a number of problems. Most pay equity studies are confined to a single employer or industry and are based on detailed job descriptions and specific job content factors. Because our study relied on national census occupational data, we could not obtain information on job content factors as they are measured in many other pay equity studies. We, therefore, looked at occupations in terms of the average characteristics of individuals within them and not at the factors required for job performance. (8)

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(8) Editor's note: A similar analysis was performed by Donald J. Treiman, Heidi I. Hartmann, and Patricia Roos in examining sex discrimination in pay rates. See: "Assessing Pay Discrimination Using National Data" in Comparable Worth & Wage Discrimination: Technical Possibilities and Political Realities, ed. Helen Remick, (Philadelphia: Temple University Press, 1984), pp. 137-154.

Thus, we developed a hypothetical model which tested the assumption of what would happen to the wages of people of color if occupations were paid according to the average level of education and experience of their incumbents. In so doing, we hoped to determine if the occupations of people of color were being rewarded for education and experience in the same way as White male occupations were. Opponents of pay equity argue that it is these human capital factors (education and experience)--not discrimination--which account for the wage gap between women and men, Whites and people of color. This analysis tested this argument and demonstrates that discrimination exists even when education and experience are held constant. While pay equity proponents advocate looking at the job not the individual, this type of analysis is useful because it provides further evidence of discrimination in wage setting. If there is discrimination, implementation of pay equity could be an effective remedy for race-based wage discrimination as it would base pay on objective factors.

We studied workers across the entire U.S. economy, not merely within a single organization. The economy-wide focus increased the variance in incomes because it added across-firm variations to the within-firm variations usually considered in pay equity studies. Thus, the inequality resulting from occupational segregation is relatively smaller. Second, we worked with 503 broad occupational titles. Recent research (Baron and Bielby, 1985) has shown that most gender inequalities result from segregation of job titles within occupations.

We began by identifying two occupational characteristics that are both valued and rewarded according to the human capital theory: training and experience. We measured those factors through proxies based on the average characteristics of the workers in the occupation. Generalized training is measured by the average years of education.

Human capital theory has also emphasized that more experienced workers are more productive and earn higher rewards because of this experience. With the census data, we estimated an occupation's requirements for work experience through its age distributions and its proportion of new workers. Occupations with high proportions of young people and of new workers have low experience requirements. To a large extent, these can be considered entry-level jobs. We divided the age distribution into six categories, and the two lowest categories--the proportion of people in their teens or their twenties--were considered young workers. New workers were defined as people who were not in the labor force in 1975. A high percentage of new workers may also signify high turnover in an occupation. An example of an occupation with high proportions of both young workers and new workers are jobs in the fast food industry, such as clerks at McDonalds.

There are many ways to study the role of training and experience as pay determinants. One common model has been to look at how White males are rewarded for their training and experience and to compare how other racial and sex groups fare relative to White males. Consistent with this approach we

began by calculating how White male earnings (9) are related to the education, experience, and average number of hours worked per week of their occupations. The analysis yields an equation which shows that occupations requiring a year more of education pay about 6% more on the average. (10) Also, occupations with high concentrations of teenagers or men in their twenties (e.g., waiters' assistants, craft apprentices) had lower earnings. For example, if an occupation rose from 4% to 5% teenagers, the analysis estimates that earnings would decline by 2.4%; and if the occupation rose from 20% to 21% men in their twenties, earnings would be estimated to decline by 1.4%. At the other end of the age spectrum, occupations with high concentrations of men over 65 (e.g., horticultural farmers, private household workers) also had significantly lower earnings. For an increase from 2% to 3% men over 65, earnings would decline by 5% (11) Occupations with many new workers also pay less, but the effect is small: a 0.4% decline in earnings for each one percentage

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(9) We have used the logarithm of earnings because it permits us to calculate the effects on proportional raises in earnings rather than the absolute dollar totals. This practice follows from the assumption that a $10,000 increase of income from $10,000 to $20,000 is comparable to doubling earnings from $100,000 to $200,000, and not to a mere $10,000 increase from $100,000 to $110,000.

(10) The formula and results are reported in Appendix 1.

(11) This is a substantial decline, but few occupations have many workers over 65 so the effect does not account for much of the variance in earnings. The most important overall impact is for occupations with many workers in their twenties.

point increase of new workers. (12) Finally, occupations with longer hours and, surprisingly, those located more in the South, pay better earnings. Both these effects are small. Each additional hour of work raises earnings by 0.8%, and one percent more workers in the South raises earnings by 0.2%.

Together, these factors (education, experience and average number of hours worked per week) account for 72.4% of all the occupational differences in earnings. This is large enough to give us confidence that even with this limited number of factors, we have captured most of what is rewarded in White male occupations.

Racial and Gender Bias in the Standards of Reward

Sometimes the results of analyses such as the above are assumed to produce a standard of reward that is somehow "fair": occupations with one year more of schooling required "deserve" to pay 6% more. But assumptions that these models produce a "fair" standard of reward ignore the possibility that racist and sexist practices may be embedded within the model. We need, therefore, to question whether the reward standards identified in the model may be masking a race or gender bias. That is, are one or more of the standards acting like a proxy for the concentration of White males? At least part of the reason these training

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(12) This is, in fact, not any larger than what we might expect by chance. For White men, the effect of experience on earnings is well captured by the age distribution so the percent new to the labor force adds little explanatory power. This is not true for analyses we have computed for women, where the more frequent entry and exit from the labor market makes the age distribution a poor indicator of work experience.

and experience factors may be rewarded is that they happen to be associated with White males and not because they contribute so much to job performance. (13)

Our data cannot evaluate the effect of the standards on job performance, but we can check which standards are associated with White male composition. Do occupations that White men dominate also require many years of schooling or have low proportions of young people? If so, this association would identify these training and experience standards as at least suspect of masking a race or gender bias.

To investigate this we compared male-dominated occupations with female-dominated occupations, and White dominated occupations with high minority occupations. In each comparison, we looked to see if women's occupations (or minority occupations) had low levels of education or high proportions of young, new, or over 65 workers. The results are reported in Table 6. There are only slight differences between men's and women's occupations on these standards. Women's occupations even have slightly more education (0.3 years) than men's occupations. But they also have somewhat higher proportions of young people, new workers, and over 65 workers, and they have slightly fewer hours of work per week. These latter differences would tend to reduce the expected earnings of women's occupations.

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(13) Editor's note: This issue is discussed further in "Effect of Race/Ethnic and Sex Segregation on Compensation Systems," pp. 76-78 of this volume.

Table 6. Pay criteria in women's and minority occupations.

	Male occupations (less than 34.1% female)*	Female occupations (greater than 34.1% female)*	Effect on expected earnings
Average education	13.2	13.5	+1.9%
Average hours	44.2	43.0	-1.0%
Percent under 30	27.5	30.8	-5.3%
Percent over 65	1.6	2.0	-2.2%
Percent new workers	10.0	12.7	-1.1%
Percent in South	30.9	29.4	-0.3%

	White Occupations (less than 14.5% minority)*	Minority Occupations (greater than 14.5% minority)*	Effect on expected earnings
Average education	14.2	12.1	-11.7%
Average hours	44.4	42.9	- 1.3%
Percent under 30	24.4	34.5	-15.0
Percent over 65	1.6	1.9	- 1.3%
Percent new workers	9.2	13.3	- 1.6%
Percent in South	31.0	29.4	- 0.4%

How important are these differences in women's occupations and men's occupations? Does the 3.4% more young workers in women's jobs reduce the predicted earnings of women's occupations very much? In fact, none of the differences have much effect on the evaluation of women's occupations. In the final column

*Most pay equity studies use a 70% cutoff point to determine female-dominated occupations. For the purposes of this study, we arbitrarily chose a cutoff that divided all 503 occupations into two equal groups for both female- and minority-dominated occupations.

we have computed how much of a difference in expected earnings would be accounted for by the differences in education, hours, etc. (14) The effects are all quite small. The largest is the proportion of young workers. The greater concentration of young workers in women's occupations causes women's work to be evaluated as 5.3% less than men's occupations. This is not a great effect and all the other effects are even smaller. In short, there is little evidence here to suggest that any of the standards we have used incorporate a large, implicit gender bias.

For race, the results are more dramatic. The fact that minority occupations tend to have high proportions of young workers causes the minority occupations to be evaluated as 15% less than the White occupations. And the lower educational levels of minority occupations cause them to be evaluated as 12% less. Both these standards may incorporate a racist bias (e.g., educational credentials may be used to screen out minorities from occupations in order to justify higher incomes for Whites). Of course, higher education also should yield more productivity, but we cannot know what part of the reward for education reflects increased productivity and what part reflects racism. The important point for now is to question any easy assumptions about the fairness of the education and experience standards. The 6% reward for each additional year of schooling may incorporate a racist (but not a sexist) bias.

(14) The precise formula we used was to subtract the mean in the women's column from the mean in the men's column, multiply this difference by the relevant coefficient in the model, and take the antilog of the result.

Calculation of Expected Earnings Based on Education and Experience

Io order to assess the impact of education and experience on wages, we calculated the expected earnings for each occupational title in the whole population based on the earnings associated with these characteristics for White males as a whole. Although we had reservations about the assumptions of the statistical model, we computed expected earnings according to the formula taken from the analysis explained above at pp. 46.

To take an example, we calculated the expected earnings of child care workers, an occupation with a high concentration of women (86%) and especially women of color (26%). (15) Our statistical formula gives us an expected salary figure of $15,261. In fact, child care workers earn, on average, about $7,119. This is only 47% of what we would expect them to earn on the basis of their experience and education. Child care workers are one of the most extreme cases of underpayment in our data.

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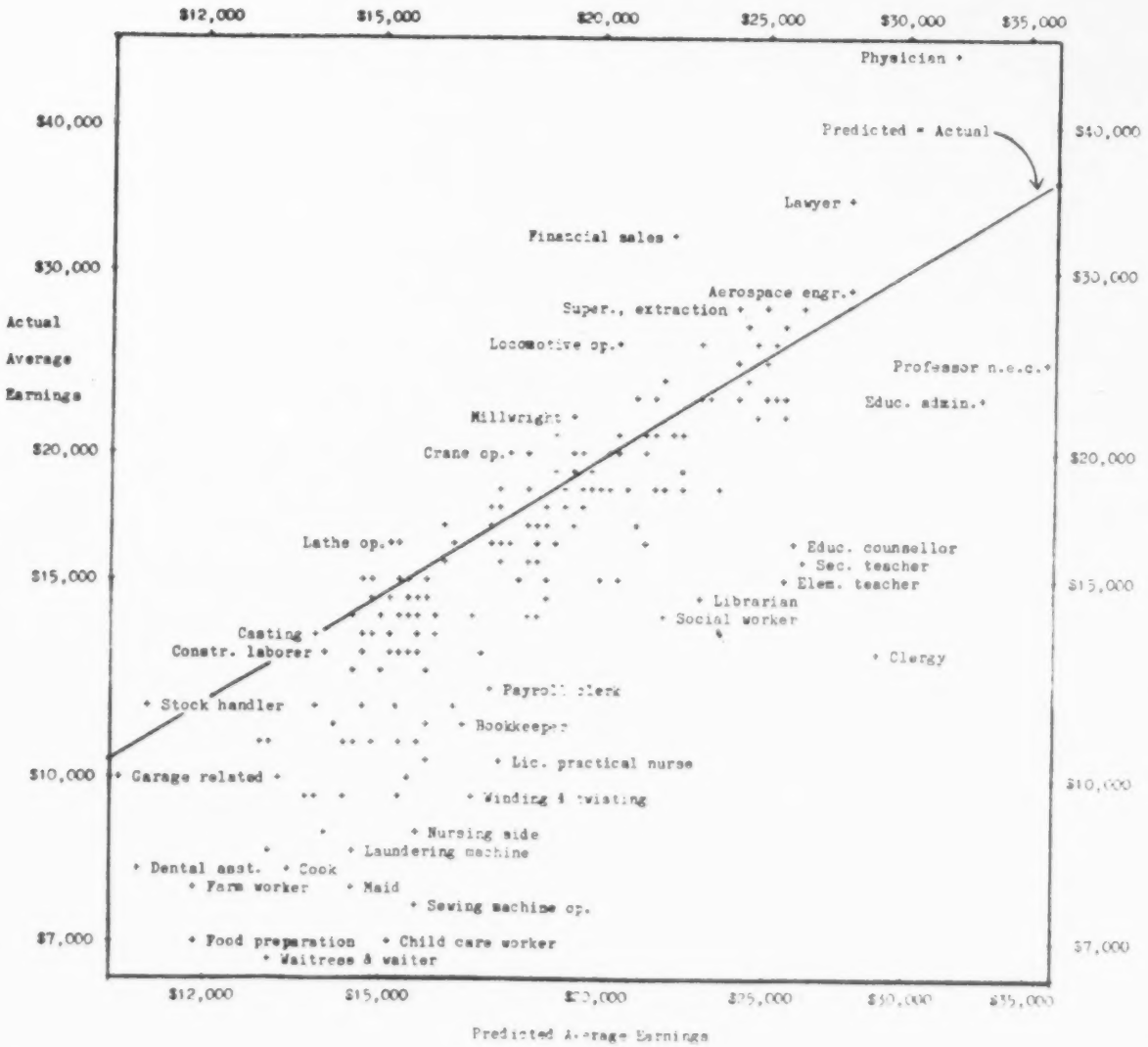
(15) See Appendix 3 for actual calculation.

In a similar manner, we have calculated the expected earnings for all of the 503 census occupations and compared these expected earnings with the actual earnings. Figure 4 reports this comparison for the largest 183 occupations. The line identifies where actual earnings match expected earnings. All occupations above the line earn more than the model predicts based on their education, hours, and age distributions. All occupations below the line earn less than expected. The figure identifies a few of these occupations. It is immediately apparent that female-dominated occupations predominate among the underpaid occupations below the line; male-dominated occupations predominate above the line. Moreover, some of the most underpaid occupations are those with high proportions of women of color (e.g., sewing machine operators, maids, and nursing aides).

The twenty-five most underpaid occupations are listed in Table 7. The lowest paid is the clergy, who with high education and few new entrants would be expected to make $28,639 but in fact make only 45% of that ($12,851). The clergy is a predominantly male occupation, but only two other occupations that are two-thirds male or more make this list: farm workers and miscellaneous professors. Of the rest, thirteen occupations are overwhelmingly female (70% female or more) and another five occupations have a majority of women. Among these are few surprises. Some of the women's occupations are severely

Figure 4. Comparison of actual and expected earnings.



underpaid: maids, child care workers, sewing machine operators, and food preparation workers are all making under $8,000 per year. However, White men in jobs with comparable levels of education and experience earn between $11,800 and $15,732. All of these low wage women's occupations have high proportions of women of color so there is good evidence that rewarding jobs on the basis of experience and training would benefit women of color as well as White women.

Table 7. Twenty five most "underpaid" occupations

census code	occupation	income actual	income predicted	actual as % predctd	% of women	women of color
176	Clergy	$12,851	$28,639	44.9%	3.5%	.2%
468	Child care workers	$ 7,119	$15,261	46.6%	85.5%	26.4%
744	Sewing machine	$ 7,568	$15,732	48.1%	93.6%	29.6%
435	Waiters & waitresses	$ 6,750	$12,963	52.1%	83.0%	9.9%
449	Maids & housemen	$ 7,945	$14,412	55.1%	71.7%	35.5%
447	Nursing aides	$ 8,778	$15,745	55.8%	85.3%	29.6%
738	Winding and twisting	$ 9,574	$16,917	56.6%	70.6%	16.5%
748	Laundering machine	$ 8,515	$14,505	58.7%	61.2%	23.8%
207	Licensed practical nurse	$10,391	$17,656	58.8%	96.1%	23.3%
156	Teachers, elementary	$15,036	$25,427	59.1%	60.8%	9.3%
444	Misc. food preparation	$ 7,132	$11,791	60.5%	56.0%	18.9%
434	Bartenders	$ 9,474	$15,462	61.3%	39.0%	2.7%
157	Teachers, secondary	$16,181	$26,336	61.4%	39.3%	4.9%
436	Cooks, exc. short order	$ 8,263	$13,246	62.4%	53.8%	18.3%
319	Receptionists	$ 8,787	$14,012	62.7%	96.7%	13.8%
163	Counselors, educational	$16,709	$25,991	64.3%	46.2%	10.5%
749	Misc. textile	$10,239	$15,903	64.4%	42.3%	11.4%
164	Librarians	$14,715	$22,791	64.6%	76.9%	8.1%
458	Hairdressers	$10,134	$15,485	65.4%	81.2%	10.0%
174	Social workers	$14,334	$21,821	65.7%	61.0%	15.5%
337	Bookkeepers	$11,012	$16,693	66.0%	88.4%	8.1%
479	Farm workers	$ 7,808	$11,757	66.4%	14.8%	2.0%
446	Health aides, other	$ 9,489	$14,267	66.5%	83.8%	19.5%
383	Bank tellers	$ 8,633	$12,931	66.8%	91.5%	10.8%
154	Professor, not specified	$23,898	$35,794	66.8%	21.3%	2.8%

Occupations paid less than expected based on education, hours, and age distribution.

Underpayment is not limited to the lowest-paid occupations: elementary and secondary school teachers, social workers, and librarians were all making $14,000 or more in 1979. However, if they had been paid according to the same criteria as White males jobs with comparable experience and education, they would have earned at least $21,000, a full 50% increase in pay.

Gender and Racial Composition of Occupations

The overall impact of these hypothetical wage adjustments on occupations of different racial and gender composition can be seen in Table 8. All the 503 occupations have been divided according to their proportions of all women and proportion of people of color. (16) Reading across the table we compare occupations that are overwhelmingly White, but increasingly female. Occupations that are predominantly male but not overwhelmingly so actually have higher earnings ($22,955) than the more exclusively White male occupations. However, our hypothetical wage adjustments would actually benefit these occupations, adding $2,364 or 10.3% to their annual earnings. Next, occupations that have high proportions of women (more than 40% women), but are still overwhelmingly White (e.g., dental hygienists), actually earn far less than the White male occupations: $16,350. Our calculated adjustments would be of greatest benefit to these occupations, adding $4,771 or 29.2% to their incomes.

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(16) We chose arbitrary dividing points so that about a third of the occupations would fall in each of the high, middle, and low concentrations.

Table 8. Actual and predicted earnings by gender and racial composition of occupations.

Occupation: percent people of color		Occupation: percent female Low (0-11)	Medium (11-40)	High (40-99)
Low (0-11)	Actual:	$21,411	$22,955	$16,350
	Predicted:	$20,936	$25,319	$21,121
		-$475	+$2,364	+$4,771
		2.2%	+10.3%	+29.2%
Medium (11-18)	Actual:	$17,523	$19,228	$13,781
	Predicted:	$17,161	$21,435	$17,866
		- $362	+$2,207	+$4,085
		-2.1%	+11.5%	+29.6%
High (18-up)	Actual:	$15,646	$13,186	$10,948
	Predicted:	$15,702	$15,342	$15,530
		+$56	+$2,156	+$4,582
		+0.4%	+16.4%	+41.9%
Totals	Actual:	$18,856	$18,389	$13,036
	Predicted:	$18,529	$20,630	$17,500
		-$327	+$2,241	+$4,464
		-1.7%	+12.2%	+34.2%

Occupations with moderate proportions of minorities follow much the same pattern, although they start from a lower base than the overwhelmingly White occupations. The male occupations with a high proportion of women would gain the most from this type of analysis. (17)

(17) Editor's note: Of course, no one advocates actual changes in salaries to conform to these predicted levels. Typically, pay equity adjustments are made based on the skill, effort, responsibilities, and working conditions involved in particular jobs. Even in such cases, wages must be raised rather than lowered to correct inequities, since penalizing one group of workers is not an acceptable remedy for discrimination against another group.

Occupations with a high proportion of minorities present an interesting picture. The overwhelmingly male occupations among them would in fact not be hurt by this kind of adjustment although their gains, $56 on average, a 0.4% increase, are small. In fact, occupations with high proportions of both men and people of color would actually benefit somewhat from these adjustments.

Among occupations with high proportions of people of color, the benefits of these adjustments increase for the more female-dominated occupations. Occupations that have high proportions of both women and people of color earned very little in 1979: $10,948. But on the basis of their education and experience, they would have earned $15,530. While this is not a great sum and is well below the actual earnings of the White male occupations, the $4,582 increase represents an average raise of 41.9%. This is a greater relative increase than for the White female occupations.

Wages paid according to education and experience would benefit both White women and women of color, but the benefits would be relatively greater for women of color. This confirms what Table 9 suggested. Not only would predominantly White female occupations benefit, but so would occupations with high proportions of women of color such as child care workers and sewing machine operators. In fact, these occupations would benefit relatively more.

Consequences for Each Race and Gender Group

The final question therefore is what would happen to each gender/racial-ethnic group as a whole if incomes were adjusted so that occupations rewarded everybody for training and experience in the same way that White men are rewarded. The previous calculations showed what would happen to different occupations; now we extend the calculations to measure the effects on average individuals in each race and gender group. These effects will be more muted since not all women of color work in occupations that have high proportions of women and people of color. But the calculations (18) do permit us to consider each of the groups separately. The results are reported in Table 10. The most immediately apparent result is that all groups of women would benefit considerably. The lowest paid women benefit the most: Black, Latina, and Native American women gain slightly more than White and Asian women.

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(18) We calculated these figures by adjusting all incomes within each occupation to eliminate any average overpayment or underpayment for that occupation (e.g., if the occupation was 10% below the expected earnings figure, everybody's income within that occupation was raised by the appropriate percentage; if the occupation was 10% above the expected earnings figure, everybody's income within that occupation was reduced by the appropriate percentage). After these adjustments we summed up all Black women's earnings (and White women's, etc.) across the 503 occupations and calculated the average for the entire country.

Table 9. Projected pay adjustments based on education and experience.

	Observed	Adjusted	Difference	Percentage Difference
WOMEN:				
Black	$10,429	$14,367	+$3,938	+37.8%
Latina	$ 9,725	$13,189	+$3,464	+35.6%
Asian	$12,432	$16,111	+$3,679	+29.6%
Native American	$10,052	$13,663	+$3,611	+35.9%
White	$11,213	$14,662	+$3,449	+30.8%
MEN:				
Black	$14,372	$16,263	+$1,891	+13.2%
Latino	$14,935	$16,473	+$1,538	+10.3%
Asian	$20,148	$21,288	+$1,140	+ 5.7%
Native American	$16,019	$17,420	+$1,401	+ 8.7%
White	$20,335	$21,449	+$1,114	+ 5.5%

Among men, White men benefit slightly (because of the benefits to the few White men working in high female or minority occupations or in the handful of underpaid male-dominated occupations). (19) Black men gain 13.2%, twice what White men would gain. Latino, Asian, and Native American men also gain more than White men.

(19) The calculations show all groups gaining on average because we use the White male pay line. This line is the standard pay line for determining discrimination because that is the line by which people of color and White women would be paid if they were not discriminated against.

CONCLUSIONS

This study has sought answers to three broad questions:

1. Are people of color segregated into a few occupational categories? In which categories are they segregated? How do the patterns of occupational segregation for women of color parallel or diverge from those of White men and women?

We found both women of color and White women work in occupations where more than two-thirds of the workers are women. However, women of color are segregated not only on the basis of their gender but also on the basis of their race. They are segregated from White men but also from White women. Women of color are more likely to be found in jobs such as private household cleaners, child care workers, and sewing machine operators.

The occupational concentrations of men of color diverge sharply from those of White men and from all women. Black men are concentrated as garbage collectors, janitors, and laborers. Latinos are concentrated as farmworkers, groundskeepers, and laborers. Native Americans are in outdoor laboring occupations such as marine life workers, forestry, and logging.

Asian men, on the other hand, differ from other men of color. Their occupational concentrations are divided into both high paying, professional jobs like engineers and physicians and low paying jobs like cooks, porters, and groundskeepers. This may be explained by the historical immigration patterns and diversity of groups included in the Asian category.

2. How is occupational segregation related to the low earnings of women of color? Are some occupations with high concentrations of women of color systematically undercompensated?

Occupations with high concentrations of women of color are among the lowest paid in the labor force (e.g., cleaners, child care workers, and sewing machine operators). Maids, child care workers, sewing machine operators, and food preparation workers all made under $8,000 per year. But when White men work in jobs with comparable educational and experience patterns, they are paid between $11,800 and $15,732. Moreover, our estimations of job value based on the average training and experience of incumbents show that jobs with high concentrations of women of color are among the twenty-five most underpaid of all 503 occupations listed in the U.S. Census.

3. Is there discriminatory application of the wages assigned to an occupation due to education and experience? If these factors were rewarded in the same manner for all people, would people of color benefit?

Yes. Our data demonstrate that women of color would be the greatest beneficiaries if occupations in which they are concentrated rewarded education and training in a manner equivalent to the way the occupations of White men are rewarded. Occupations that have high proportions of both women and people of color earned very little in 1979 ($10,948), but on the basis of the education and experience backgrounds of the job holders, they should have earned 41.9% more. This is a relatively greater increase than for White female occupations.

Men of color would benefit in two ways: directly from small increases in their own earnings, and indirectly through the family income from the large increases in earnings that would accrue to women of color.

While this analysis is not a standard pay equity study, it does suggest that basing pay on education and experience for people of color, in the same manner as for White men, would raise the wages of people of color. Our results provide further evidence of discrimination against people of color and White women in the wage-setting process.

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Appendix 1. Log of earnings and percent female

The relationship between the earnings and percent female in an occupation is given by the equation:

Log earnings= -.686 x Percent female +9.877

The -.686 coefficient represents the effect on logged earnings of the difference between 100% female and 0% female occupations. The ratio of earnings of the two types of occupations is given by the exponent of the coefficient: exponent (-.686=.504 (i.e., an occupation that is 100% female is estimated to make 50.4% of an occupation that is 0% female).

Appendix 2. Regressions of logged 1979 earnings.

Variable	correlation	coefficient	std. error	std. coefficient
Average education	.700	.063*	.007	.420
Percent not in lf in 1975	-.582	-.394	.388	-.063
Average hours	.142	.008*	.003	.103
Percent under 20 yrs old	-.630	-2.383*	.782	-.159
Percent 20-29 yrs old	-.693	-1.430*	.324	-.471
Percent 30-39 yrs old	.627	-.286	.423	-.062
Percent 40-49 yrs old	.672			
Percent 50-64 yrs old	.145	-.532	.450	-.125
Percent 65 and over	-.025	-4.964*	.811	-.256
Percent in South	.071	.227*	.113	.049
Constant		9.352		
Multiple R	.851			

N= 503 occupational titles
(weighted by number of White men in each occupation)

Sample= White male Full time, year round civilian labor force
= 1,100,709

a Dropped from regression equation to prevent statistical redundancy.

* Coefficient greater than twice the standard error.

Appendix 3

Logarithm of expected earnings (child care workers)=

9.36

+ .060 x 13.9 average years of education

- .024 x 1.1. % 15-19

- .014 x 52.9 % 20-29

- .003 x 21.0 % 30-39

- .005 x 14.5 % 50-64

- .050 x 0.0 % 65+

- .004 x 22.5 % new

- .008 x 45.5 average hours per week

+ .002 x 29.0 % in South

= 9.633

= logarithm of $15,261

Actual earnings = $7,119

CHAPTER II

Pay Equity for Blacks and Hispanics in New York State Government Employment

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PAY EQUITY FOR BLACKS AND HISPANICS IN NEW YORK STATE GOVERNMENT EMPLOYMENT

CHAPTER SUMMARY

The Center for Women in Government conducted a study of the New York State classification and compensation system to determine whether the lower wages of Blacks and Hispanics in the State are due, in part, to their concentration in a narrow range of low-paying occupations segregated by race, ethnicity, and sex. They also looked at whether jobs disproportionately held by Blacks and Hispanics show systematic undervaluation relative to the pay for comparable jobs performed by White males. While Asians were not shown to suffer from wage discrimination in this study, they do suffer from other forms of employment discrimination as shown in other chapters in this volume.

This analysis indicated that differences in pay between White male-dominated and disproportionately Black and Hispanic job titles are not due to differences in job content but are based on the racial/ethnic and sex composition of job titles. Implementation of pay equity would eliminate these differences.

By applying the White male compensation formula to every job title, the researchers obtained a predicted salary grade indicating what the salary for all jobs would be if they were treated the same as White male jobs. The results indicate that, on average, the most undervalued jobs are those that are both disproportionately Black and Hispanic and also female (nearly 3 grades). Jobs that are Black and Hispanic show an average undervaluation of one and a half salary grades. In New York State, a one grade increase equals a salary increase of 5%.

Education and experience are more important in determining

compensation in disproportionately Black and Hispanic jobs than in White male jobs. The weights (or relative importance) of all factors except managerial/supervisory responsibilities are different for Black and Hispanic jobs than for White male jobs. Furthermore, White male jobs start out two salary grades ahead of Black and Hispanic titles, before any job content is taken into consideration.

Introduction

According to Treiman and Hartmann (1981), the single most important cause of the wage gap between men and women is the concentration of women in a narrow range of low-paying sex-segregated occupations. Full-time, year-round employed White women earned $.67 for every $1.00 earned by similarly employed White men in the first quarter of 1986 (U.S. Department of Labor, 1986). (1) The wage gap between White men and women of color was even greater. Black women were paid $.61 and Hispanic women $.53 for every $1.00 paid to White men. Men of color also experienced a significant wage differential. Black men earned $.72 and Hispanic men $.68 for every $1.00 White men earned (U.S. Department of Labor, 1986). As women of color entered jobs formerly dominated by White women, the wage gap between White women and women of color narrowed. By 1982, for example, Black women, on average, earned almost as much as White women in white-collar jobs, and about 90 percent of the income of White women in blue-collar jobs (Westcott, 1982). This convergence of the wages

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(1) We define White as the residual category, that is people who are not Hispanic, Black, Asian, Pacific Islander, American Indian, or Alaskan Native.

of White women and women of color does not mean that the problem of wage discrimination is over for women of color, because as Burstein (1979) notes, White women experience substantial wage discrimination. Thus he recommends comparing the incomes of all women as well as men of color to White men's incomes.

When one moves to comparisons within employers, the basic national patterns prevail. The situation in New York State is a good example. For the past 25 years, the number of Blacks and Hispanics employed by the State has been growing consistently. Yet, this growth has not been accompanied by their integration into a broad range of the State's occupational categories and salary levels. Rather, Black and Hispanic workers are overrepresented in certain occupations, particularly those at the lower end of the salary scale. An important consequence of being employed in these limited number of occupations is that workers are often blocked from promotions because they do not hold feeder jobs for higher-level State positions (Haignere, Chertos, Steinberg, 1982).

The Center for Women in Government conducted a study of the New York State classification and compensation system to determine if it contained biases against women and racial/ethnic minorities. (2) The Civil Service Employees Association and the Governor's Office of Employee Relations obtained funding for the study--one of the first state job evaluation studies to include both race and sex.

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(2) We use the term racial/ethnic minorities in this essay rather than people of color, to refer to Blacks, Hispanics and Asians.

In this chapter, we provide some of the results of the New York State study by exploring the possibility that the lower wages of Blacks and Hispanics (3) in New York State may be due, in part, to their concentration in a narrow range of low-paying occupations segregated by race, ethnicity, and sex. Specifically, we examine whether the proportion of Black and Hispanic workers in State government titles affects their wage rates. We also assess whether jobs disproportionately held by Blacks and Hispanics show systematic undervaluation relative to the pay for comparable jobs performed by White males.

We begin by looking at how occupational segregation can lead to undervaluing jobs by embedding discriminatory features in compensation systems. Next we trace trends in the race/ethnic composition of the New York State government workforce from 1969 to 1984, with particular attention to occupations in which Blacks and Hispanics are concentrated. Third, we describe how we collected our data. Fourth, we present the results of our analysis of the relationship between the racial composition of occupations and their salaries. Finally, we discuss how Blacks and Hispanics in New York State can benefit from the implementation of pay equity.

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(3) We limited our analysis of pay equity to Blacks and Hispanics because we found that in New York State Government Asians are concentrated in high-paying technical and administrative job titles.

Effect of Race/Ethnic and Sex Segregation on Compensation Systems

As Steinberg (1984) notes, occupational segregation by race or sex can contribute to the wage gap in one of two ways. First, for a variety of reasons, White women and racial/ethinic minorities may be systematically channeled into low worth jobs; that is, jobs that require less skill, effort, and responsibility than jobs filled by White males. In this case, their lower pay results from productivity-related job content differences. Affirmative action policies work to eliminate this source of the wage gap through increasing the mobility of women and racial/ethnic minorities into higher paying jobs.

Second, White women and racial/ethnic minorities may be segregated in jobs that are paid less even though they require equivalent amounts of skill, effort, and responsibility as jobs held mainly by White males. Insofar as wage differences associated with the race/ethnic or sex composition of jobs cannot be accounted for by these productivity-related job characteristics, these jobs may be systematically undervalued. In short, the jobs are paid less because they are filled predominantly by racial/ethnic minorities and White women. Thus, the concentration of Blacks and Hispanics in lower New York State salary grades could be due either to channeling these groups into low-worth jobs, or to underpaying the jobs they frequently perform, even though the jobs require equivalent amounts of skill, effort, and responsibility as jobs done primarily by White males, or to both of these reasons.

Given traditional assumptions about the value of work done

by women and racial/ethnic minorities, the race/ethnicity and sex of typical job incumbents may play a subtle role in the assignment of salaries to jobs (Steinberg and Haignere, 1985). These groups predominate in service and people-oriented sectors which Desmond and Weiss (1973: 188) found supervisors rated less consistently.

> Differences were found in the amount of variance of ratings within jobs. Jobs such as Mechanical Engineer, Computer Programmer, Adding Machine Serviceman, Welder, and Sheet Metal Worker were rated with less variability than were Dietician, Librarian, Secretary-Stenographer, and Sewing Machine Operator. The jobs which were rated more consistently seemed to require working more with objects and hand tools and may have been easier to assess because specific tasks may have been more easily identified. The jobs which were less consistently rated were more service-oriented, or people-oriented, with tasks not as readily defined; they were also jobs in which women predominated.

Thus, race/ethnicity and sex may be "implicit compensable factors" in classification systems of employers when jobs filled by higher proportions of females or racial/ethnic minorities are paid less than those employing lower proportions of these groups and which require equivalent levels of skills and responsibilities. (4)

Shepela and Viviano (1984: 47) report that "there are considerable anthropological and sociological data to indicate that the value of an activity or characteristic can be lowered simply through its association with women." The National

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(4) "Implicit compensable factors" are characteristics that affect salaries and wages which are not explicitly stated. For instance, being a racial/ethnic minority or female may be factors which decrease a worker's salary.

Research Council/National Academy of Sciences Committee arrived at the same conclusion: "it is possible that the process of describing and evaluating jobs reflects pervasive cultural stereotypes regarding the relative worth of work traditionally done by men and work traditionally done by women" (Treiman and Hartmann, 1981: 81). The race/ethnic as well as sex composition of jobs may have been taken into consideration when wages and salaries were set.

Blacks and Hispanics in New York State Government Employment

In 1968, racial/ethnic minorities constituted 14 percent rf the State workforce (New York State Department of Civil Service records, 1969-84). (5) Blacks, in particular, appear to have been well represented, as Blacks constituted 8.4 percent of the State's population and 12 percent of the State's workforce. Puerto Ricans were underrepresented, constituting 4.5 percent of the State's population, but only 1.3 percent of the State's workforce. (6) While "other race/ethnic minorities," a category which consisted primarily of Asians, held well-paying administrative and professional jobs, both Black and Puerto Rican employees were concentrated in lower paying service occupations, especially Mental Health Therapy Aides. (7) In fact, Blacks

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(5) The classification of race/ethnic groups changed significantly over the twenty-year period reviewed here. Until the early 1970's, the categories were White, Negro, Puerto Rican, and Other (including Japanese, Chinese, Filipino, and American Indian). At that time, the categories were revised to White, Black, Spanish Surname, Asian American, American Indian, and Other (including Aleuts, Eskimos, Malayans, and Thais). In 1976, the race/ethnic categories were revised to White, Black, Hispanic, Asian or Pacific Islander, and American Indian or Alaskan Native. To add to the confusion, the occupational categories New York State used also changed over this period. Therefore, we are unable to report comparable information for each year.

(6) "Other race/ethnic minorities," primarily Asians, constituted 0.7 percent of the State workforce and 0.5 percent of the State's population.

(7) This marked difference between Asians, Blacks, and Hispanics continues to this date.

alone constituted over one-fourth of all the State's service workers. Over two-thirds of all Blacks and Puerto Ricans were employed in salary grades 1 to 6 in a 38 grade system, compared to only one-third of Whites.

Racial/ethnic minorities constituted 17.3 percent of the State workforce by 1972, yet occupational segregation persisted. (8) The proportion of Blacks and Hispanics in service occupations had grown to 32.8 percent and 4.2 percent, respectively. Thus, while Blacks and Hispanics were only 16.1 percent of all employees, they held 37 percent of all service jobs in the State. Furthermore, the proportion of Blacks in correctional and protective services more than doubled during these five years from 6.4 to 13.5 percent. Hispanics rose from 0.4 to 1.9 percent of all protective service workers. Almost 29 percent of Blacks and 37 percent of Hispanics were employed in salary grades 1 to 6, compared to approximately 21 percent of Whites.

By 1977, racial/ethnic minorities had increased to 19.6 percent of all State employees. Almost 48 percent of all Blacks and 32 percent of all Hispanics were in paraprofessional titles; many of these were mental health workers. (9) The proportion of

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(8) "Other race/ethnic minorities" remained 0.7 percent of the State workforce.

(9) The category "service worker" was no longer used by the State in 1977.

Blacks employed in protective service jobs had fallen slightly to about 12 percent while the proportion of Hispanics grew to 3 percent. Approximately 55 percent of all racial/ethnic minority employees earned less than $10,000 per year, compared to 44 percent of Whites.

Over 21 percent of State employees were racial/ethnic minorities by 1982: 17 percent Black, 3 percent Hispanic, and 1 percent all "Other Racial/Ethnic Minorities." Blacks and Hispanics continued to be concentrated in paraprofessional, clerical, and protective service occupations. Thus, we find that while the proportional representation of Blacks and Hispanics in State employment has increased since 1968, both groups remained concentrated in specific relatively low-paying occupations.

When this study began in 1981, racial/ethnic minorities constituted only 22 percent of New York State's workforce, yet they made up 39 percent of those in salary grades 12 and below in the 38 grade system. Over 75 percent of racial/ethnic minorities worked in positions below grade 12. By 1982, approximately 57 percent of White male New York State employees earned over $16,000 per year; however, only 35 percent of racial/ethnic minority males and 21 percent of racial/ethnic minority females earned that much (McLaughlin, 1984).

In short, as with most other large employers in our country, racial/ethnic minorities in New York State government employment received lower salaries on average than White men.

We found that the average salary grade for Hispanics was 12.3, for Blacks 10.9, and for other racial/ethnic minorities

17.9. From these results, we concluded that Hispanics and Blacks hold different jobs in New York State employment than those held by "Other Racial/Ethnic Minorities," a group as we noted earlier, which included many Asians in higher paid administrative, professional and technical jobs. (10) For this reason we did not include Asians in our study.

In summary, we have demonstrated that Blacks and Hispanics are largely concentrated in the lower salary grades of New York State government employment. In general, the more Blacks and Hispanics in a job title, the lower its salary grade. On average, as the proportion of Blacks and Hispanics in a job title increases by one percent, the salary grade declines by 0.186. Therefore, for every five to six percent increase in Black and Hispanic representation in a job title, we see approximately one salary grade decrease. A one percent increase in the proportion of women in a job title, on average, lowers its salary grade by .341. Furthermore, the more women there are in a job title, the more Blacks and Hispanics. Thus, Blacks and Hispanics tend to be concentrated in female-dominated jobs. This paper explores whether the low pay of occupations held disproportionately by Blacks and Hispanics reflects only legitimate differences in job worth or whether it may be due to the undervaluation of this work.

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(10) Editor's note: Asians have different employment problems depending on their nationality and the section of the country being studied. For instance, in Los Angeles County while Asians have a relatively high income as a group, they have not received promotion to managerial positions in the County workforce.(See Chapter Four)

Research Methods

Pay equity studies are designed to determine whether salaries assigned to job titles accurately reflect a consistently applied standard of job worth regardless of the race/ethnicity or sex of typical job incumbents (Steinberg and Haignere, 1985). The unit of analysis is the occupation rather than the individual employee or position. Pay equity research focuses on job content characteristics which may be related to wages, such as the education or experience required to fill a job title, and not the education or experience of individuals in the title, even though we can expect these to be highly correlated. Similarly, pay equity research is less concerned with unique job content features of individual positions within a job title than with job content common to all positions belonging to one job title. (11)

This research uses data generated for a larger study of pay equity in New York State government employment (Steinberg et al., 1986). To describe all jobs fully we developed a questionnaire written at a seventh grade reading level and customized to the range of job content characteristics associated with work in New York State government. For each question, we asked employees to choose from a number of possible closed-ended responses. We chose this method in order to minimize the effect of respondents' varying abilities to express ideas in writing and to eliminate any race/ethnic or sex differences in word usage or

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(11) A "job title" in New York State is a group of positions, the incumbents of which have similar tasks and responsibilities. Examples of job titles disproportionately held by Blacks and Hispanics are hospital attendant 1, launderer, senior underwriting clerk, and senior youth division counselor.

comprehension of job content characteristics. We designed only one questionnaire so that we asked exactly the same broad range of questions of employees in every job title.

Our study included all classified job titles in the New York State Civil Service System with four or more incumbents, excluding only the following kinds of titles: those for which salaries are not set by the Civil Service System or where salaries are set by law; State university faculty and professionals; and titles located only in eight so-called State quasi-agencies. (12) We limited the sample of job titles to those with four or more incumbents because race/ethnic and sex composition of titles may be very unstable across time in titles with three or fewer incumbents. Given these parameters, our study population consisted of 1,635 job titles in the State classified service.

Our study was designed to maximize the sample size of incumbents within job titles in order to minimize any error of estimate for job titles. (13) We limited our respondents to full-time employees with more than one month's tenure in the 1,635

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(12) The eight so-called quasi-agencies are: Bridge Authority, Commission on Investigation, Energy Research and Development Authority, State Police Law Enforcement titles, Housing Finance Agency, N.E. Queens Nature and Historic Preservation Commission, Teachers Retirement, and the Thruway Authority.

(13) The standard error measures how accurate the results based on a sample are as an estimate of what the results would be if every person working in each job title were studied. In general, the larger the sample, the smaller the standard error.

job titles being studied. For most job titles, we sampled twenty employees; for those titles with twenty or fewer incumbents, we sampled all employees. For the 168 disproportionately Black and Hispanic or female job titles in Civil Service Employees Association bargaining units for which we were contractually obligated to assess undervaluation, we sampled all employees in titles with 150 or fewer incumbents and 150 individuals from titles with more than 150 incumbents. The original sample contained 37,282 State employees. Respondents returned a total of 27,394 completed questionnaires, providing a response rate of over 73 percent. After verification of the data and elimination of job titles with low response rates or fewer than four incumbents, information on 1,602 job titles remained for this analysis.

For each title, we averaged individual incumbent responses in order to calculate scores for each job title on each question. (14) This process provided a single composite statistical description of each job title. A factor analysis of the questionnaire data grouped our questions into 14 different types of job content

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(14) We averaged incumbent responses within each job title in order to minimize the effect of any unique incumbent differences in filling out questionnaires, including tendencies to inflate or to understate skills and responsibilities. This procedure also averages actual variations in job content of positions within titles, thereby providing a description of the typical content of each job title.

performed by New York State employees. We used multiple regression analysis to determine the set of job content characteristics and weights that best describes the way New York State compensates its employees. (15) In other words, we calculate the weights for specific job content features, such as managerial and supervisory responsibilities involved and level of education needed to perform the job, according to how much they are statistically related to the way salary grades are currently assigned by New York State. The weight for each job content characteristic was derived from a statistical model which, in effect, makes explicit what job content is currently implicitly valued for compensation purposes within the State. (See Steinberg et al., 1986, for more information on this technical procedure.)

Pay equity job evaluation requires that compensation models be free of race/ethnic and sex bias. In other words, race/ethnic and sex composition of a job title cannot be implicit compensable factors, which could lower the salaries of disproportionately Black and Hispanic or female job titles. In order to determine whether workers in jobs that are filled disproportionately by Blacks and Hispanics or females are being paid

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(15) "Multiple regression analysis" is a statistical method of analyzing a number of different characteristics to measure which of these factors is significant in determining an outcome. In this case, salary level is the outcome we studied.

fairly, we needed a non-biased standard for assigning appropriate grade levels to these titles. One approach to deriving an unbiased compensation model includes only White male-dominated titles in the analysis, because doing so removes the negative effects of race/ethnic and sex discrimination from the compensation model. The logic underlying this strategy is that salaries assigned to jobs held primarily by White males, by definition, are not depressed by race/ethnic or sex discrimination. The resulting mathematical formula describing the relationship between salaries and job content characteristics is thus essentially a non-discriminatory compensation model. White males are an appropriate standard for the reasons noted above and because they are the implicit comparison group in equal employment opportunity laws (Burstein, 1979).

One disadvantage of using the White male model is that doing so means accepting the compensation values of White male jobs. Some pay equity proponents have argued that we need to change what employers value, so that the undervalued job content of women's work, which may not be present in men's work, receives greater compensation. While we agree with this goal, our analysis is based on what Burstein argues was the intent of equal employment opportunity laws--that people who had experienced discrimination would be treated as well as White men are treated. The question of whether New York State ought to change the way it values job content is a policy question left for future analyses.

Therefore, we used the job content characteristics and salaries of White male-dominated job titles to determine

race/ethnic and sex-neutral compensation practices for New York State. We then used the formula describing the way pay is assigned to White male-dominated job titles to estimate what a non-discriminatory salary grade would be for each job title in the study. The difference between the existing salary grade and the salary grade predicted by the White male pay practices formula, then, indicates whether disproportionately Black, Hispanic, and female job titles were systematically undervalued compared to White male-dominated job titles.

Defining "White Male" Job Titles

As we stated previously, the argument underlying use of the White male compensation model is that the salaries of jobs done primarily by White males are not lowered by race/ethnic or sex discrimination. This claim requires that the definition of "White male" be very restrictive, without eliminating almost all job titles. Therefore, we defined a "White male" job as one filled 90 percent or more by Whites and 90 percent or more by males.

Defining "Disproportionately Black and Hispanic" and "Female-Dominated" Job Titles

A "disproportionately Black and Hispanic" job title is one in which there are at least 40 percent more Black and Hispanic workers than would be expected given their proportion in the workforce. Similarly, jobs are considered "female-dominated" if their percentage female is at least 40 percent larger than their proportion in the workforce. Since Blacks and Hispanics

constitute 22 percent of the New York State workforce, a disproportionately Black and Hispanic title is one in which 30.8 percent or more of the incumbents are Blacks and Hispanics. Women constitute 48 percent of the total State workforce, thus female-dominated job titles are defined as those in which at least 67.2 percent of incumbents are women. (16)

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(16) The definitions of disproportionately Black and Hispanic and female-dominated job titles were developed jointly by the Civil Service Employees Association and the Governor's Office of Employee Relations with consultation from the Center for Women in Government. After reviewing other pay equity studies, we found that most used a 70 percent cut off point for female-dominated job titles. However, we discovered that using the 70 percent rule for defining female-dominated jobs would exclude some of the largest titles in which, historically, Blacks and Hispanics as well as women have worked, such as Mental Hygiene Therapy Aides, Housekeepers, and Launderers. Using a 70 percent cutoff for disproportionately Black and Hispanic jobs would have eliminated virtually all job titles, since only a few would meet this standard. We decided, therefore, that the traditional 70 percent cutoff point was too high given the race/ethnic and sex composition of the New York State government labor force. As a result, the above formula was developed to tie definitions to the proportion of Black, Hispanic, and female State employees.

Findings

In this section, we assess whether jobs disproportionately held by Blacks and Hispanics are systematically undervalued relative to comparable job titles disproportionately filled by White men. We find that, on average, job titles filled disproportionately by Blacks and Hispanics are undervalued by over one and a half salary grades compared to White male jobs.

Figure 1 describes New York State's existing pay practices for White male job titles. Ten job content characteristics account for the differences in pay among the 464 White male jobs in our study. The ten characteristics indicate the job content which appears to be valued in New York State's current compensation system. The numbers preceding job content characteristics are their weights. They indicate the relative value given to each job content characteristic as it is being combined with the others to reach a salary grade assignment for each job title.

Figure 1

New York State Pay Practices
for 464 White Male-Dominated Job Titles

*constant:	+ 2.14
	+11.45 x Complexity of Writing Responsibilities
	+ 9.71 x Education Required
	+ 7.63 x Experience Required
	- 4.44 x Unfavorable Working Conditions
	+ 4.47 x Managerial/Supervisory Responsibilities
	- 3.38 x Amount of Communication with Public
	+ 3.22 x Responsibility for Preventing Damage to Equipment
	+ 2.17 x Group Facilitation Responsibilities
	+ 3.16 x Seriousness of the Consequences of Error
	- 1.48 x Working with Machines
	Predicted Salary Grade

* The constant is the minimum salary grade if the job title involves none of the job content measured.

By far the most important determinants of a White male-dominated job title's salary grade are the complexity of writing responsibilities, the educational requirements, and the amount of experience required. For instance, the weight shows that the average difference between two White male job titles requiring the most and least complex types of writing is eleven salary grades, all other characteristics being equal. Complexity of

writing requirements is as important and as strong a determinant of salary grade as are education and experience. For White male-dominated jobs, writing complexity may be the characteristic that distinguishes administrative and professional jobs from manual jobs.

Educational requirements also have a very strong effect on salary grade. The average difference in salary grade between two White male job titles, one requiring the greatest amount of education and the other requiring the smallest amount of education, is nearly ten salary grades excluding all other characteristics. The effect of experience is also large; the average difference between White male job titles requiring the most and least related experience is about eight salary grades, all other characteristics being equal. These results are, of course, not surprising because education and experience are important components of almost all job specifications in New York State. The extent to which a job title involves management and supervision has a substantial effect as well. The average difference between two White male job titles requiring the most and least managerial and supervisory responsibilities is about four salary grades, net of all other characteristics.

Taken together, this formula accounts for 88 percent of the differences in salary grades among the 464 White male-dominated job titles. This indicates that the formula is very successful in capturing the current pay practices for White male job titles in New York State government. Writing, education, experience, and management/supervision are the most highly compensated job content characteristics for White male

jobs. In contrast, unfavorable working conditions, communication with the public, and working with machines are negatively valued, so that the worse a job's working conditions or the more it involves talking to the public, or working with machines, the less it pays.

Job titles with more Blacks and Hispanics are more likely to involve unfavorable working conditions, communication with the public, and working with machines. Thus, New York State's current compensation system seems to be biased against disproportionately Black and Hispanic job titles by negatively valuing some of their typical job content. Furthermore, disproportionately Black and Hispanic jobs tend to involve contact with difficult clients. This job content characteristic is not currently valued at all in New York State's pay practices. If New York State changes its pay practices, Blacks and Hispanics may benefit from positively compensating jobs which involve working with difficult clients, unfavorable working conditions, communicating with the public, and working with machines. Thus, not valuing or negatively valuing these characteristics has a disproportionately negative effect on Black and Hispanic workers.

We applied the White male compensation formula to every job title to obtain a predicted salary grade, indicating what the salary would be if all jobs were treated the same as White male jobs. Because pay equity analysis involves comparing the salary currently assigned to a job title with the salary it would have under an equitable valuing method, we analyzed the difference between the salary grade predicted for a title through our analysis and

the title's current salary grade. Therefore, according to our definition, evidence of a pay equity problem exists when job titles disproportionately held by a given group tend, on average, to be undervalued by the current compensation system. If the predicted salary grade for a job is higher than the actual current salary grade, then the job can be said to be underpaid relative to its job content characteristics. Table 1 contains our salary grade predictions for the disproportionately Black and Hispanic job titles we found to be undervalued.

Table 1. AVERAGE UNDERVALUATION OF DISPROPORTIONATELY BLACK AND HISPANIC JOBS COMPARED TO WHITE MALE PAY PRACTICES

Job Title	Salary Grade Undervalued	Percent Black & Hispanic	Percent Female	Number of Employees In Title	Current Salary Grade
Drafting Assistant	8.81	75	20	5	3
Linen Sorter	7.73	57	43	7	2
Affirmative Action Asst.1	7.49	100	100	5	18
Regional Affirmative Action Representative 2	7.48	100	25	4	18
Supervising Beautician	7.12	67	100	7	9
Disability Determination Review Clerk 1	6.55	89	80	15	5
Correctional Volunteer Services Assistan	5.97	33	50	4	14
Energy Asst. Review Aide	5.96	57	71	7	7
Laboratory Caretaker	5.39	36	58	26	4
Hosp. Clinical Technician	5.29	100	100	24	6
Motor Vehicle Repr. 1	5.14	37	82	63	4
Head Cook	4.99	31	8	112	12
Compliance Specialist 1	4.98	86	11	8	18
Vocational Rehabilitation Counselor Assistant	4.96	50	80	5	12
Elevator Operator	4.91	47	33	24	5
Affirmative Action Administrator 1	4.79	83	43	8	18
Senior Security Officer	4.72	67	0	4	11
Supervising Barber	4.61	67	20	6	9
Community Residence Dir.	4.46	33	62	300	13
Health Facilities Surveyor 1 Nursing	4.45	31	96	24	15
Minority Business Specialist 2	4.43	75	75	4	23
Security Officer	4.27	78	36	64	8
Medical Lab. Technician 1	4.25	60	33	5	9
1 Substance Abuse Education of the Disadvantaged Program Aide	4.20	50	63	8	14
Launderer	4.11	42	62	581	4

Table 1 (con'd)

Job Title	Salary Grade Under-Valued	Percent Black & Hispanic	Percent Female	Number Employees in Title	Current Salary Grade	Predicted Salary Grade
Cleaner	3.99	38	53	3882	4	7.99
Hospital Attendant 1	3.93	49	83	330	4	7.93
Chauffeur	3.82	38	7	14	7	10.82
Correctional videotape Monitor	3.76	60	86	7	5	8.76
Utilization Reviewing Nurse	3.68	42	95	56	15	18.68
Dietitian Aide	3.68	50	100	8	5	8.68
Community Worker	3.65	100	40	4	10	13.65
Social Services Rep.	3.61	32	59	34	18	21.61
Nutrition Education Cons.	3.59	44	100	8	22	25.59
Supervising Housekeeper	3.50	37	58	148	9	12.50
Body Repair Inspector	3.49	40	0	10	14	17.49
Health Facility Management Assistant 2	3.39	36	33	14	18	21.39
Food Service Worker 1	3.28	41	76	1739	4	7.28
Senior Compensation Claims Clerk	3.27	37	80	98	8	11.27
Housekeeper	3.14	41	62	391	6	9.14
Mental Hygiene Special Adolescent Treatment Asst	3.07	86	11	9	12	15.07
Human Rights Sp. 3	3.06	60	25	4	25	28.06
Psychiatric Social Work Assistant 2	2.85	33	61	83	14	16.85
Minority Business Enterprise Liaison Specialist	2.85	100	25	6	18	20.85
Affirmative Action Off.2	2.84	76	56	9	23	25.84
Senior Lab. Technician Biochemistry	2.72	33	46	12	12	14.72
Senior Underwriting clerk	2.69	42	66	103	8	10.69
Senior Minority Group Personnel Specialist	2.69	100	53	12	18	20.69
Youth Employment Program Specialist	2.68	40	50	4	18	20.68

Table 1 (con'd)

Job Title	Salary Grade Under-Valued	Percent Black & Hispanic	Percent Female	Number Employees in Title	Current Salary Grade	Predicted Salary Grade
Mental Hygiene Therapy Assistant 1	2.67	37	71	611	11	13.67
Senior Chauffeur	2.65	50	11	10	9	11.65
Youth Program Superv.	2.64	92	52	29	16	18.64
Tax Compliance Agent 4	2.38	50	13	4	21	23.38
Assistant in Educational Integration	2.33	75	50	4	22	24.33
Affirmative Action Administrator 2	2.28	70	71	9	23	25.28
Associate in Special Occupational Education Services	2.25	50	20	5	26	28.25
Mental Hygiene Halfway House Aide 2	2.15	50	13	7	12	14.15
Senior Launderer	2.13	41	50	168	7	9.13
Electrocardiograph Tech.	2.05	50	96	30	8	10.05
Associate Medical Care Administrator	2.04	35	22	18	25	27.04
Affirmative Action Officer 3	2.04	75	25	4	25	27.04
Community Client Services Assistant	2.02	57	70	205	11	13.02
Assistant Baker	1.98	75	0	9	6	7.98
Principal Empl. Security Clerk	1.96	44	89	64	11	12.96
Human Rights Specialist 1	1.91	41	56	18	19	20.91
Senior Youth Division Counselor	1.85	47	20	111	21	22.85
Building Guard	1.79	40	6	34	6	7.79
Insurance Frauds Inv.	1.77	80	13	6	17	18.77
Senior Central Medical Supply Tech.	1.74	33	67	6	8	9.74
Mental Hygiene Halfway House Assistant 1	1.68	37	38	17	9	10.68

Table 1 (con'd)

Job Title	Salary Grade Under-Valued	Percent Black & Hispanic	Percent Female	Number Employees in Title	Current Salary Grade	Predicted Salary Grade
Housing and Community Development Assistant Spanish Speaking	1.67	33	33	8	18	19.67
Principal Clerk Coll.	1.67	75	100	6	11	12.67
Youth Division Aide 2	1.64	37	28	129	9	10.64
Senior Offset Printing Machine Operator	1.64	35	0	76	9	10.64
Autopsy Aide	1.48	50	0	4	7	8.48
Teaching Hospital Sterile Supply Technician	1.47	50	93	28	8	9.47
Electronics Technician	1.22	75	0	6	9	10.22
Regional Affirmative Action Coordinator	1.12	100	50	4	23	24.12
Supervising Janitor	1.10	38	30	224	9	10.10
Mental Hygiene Therapy Aide 1	.99	36	69	18160	9	9.99
Residential Treatment Facility Coordinator	.98	33	60	5	25	25.98
Public Health Repr. 2	.96	33	44	9	16	16.96
Youth Division Aide 3	.96	45	23	413	12	12.96
Network Program Adm.	.80	57	30	10	18	18.80
Parks and Recreation Assistant	.76	44	30	9	8	8.76
Compensation Claims Exam.	.69	36	59	104	14	14.69
Social Services Disability Aide	.55	33	83	6	11	11.55
Consumer Services Sp. 1	.54	34	16	30	14	14.54
Laundry Manager 1	.53	50	0	4	14	14.53
Laborer	.52	42	10	1778	6	6.52

As Table 2 demonstrates, disproportionately Black and Hispanic job titles are undervalued compared to White male jobs. According to Table 2, the difference between predicted and current salary grades, averaged across all disproportionately Black and Hispanic titles, is 1.59 grades. In New York State an increase of one salary grade is an increase of approximately five percent in salary. On average, then, disproportionately Black and Hispanic job titles appear currently to be undervalued by one and a half salary grades (i.e., the average salary grade for Black and Hispanic titles should be one and a half grades higher than it is now).

Table 2

Mean Difference Between
Predicted Salary Grade and Current Salary Grade
by Percent Black and Hispanic and Percent Female
(Number of Job Titles is in Parentheses)

	Percent Female			
Percent Black and and Hispanic	Male (0-10%)	Integrated (10.1-67.1%)	Female (67.2%-100%)	Total
White (0-10%)	-.07 (464)	.31 (495)	1.95 (147)	.37 (1106)
Integrated (10.1-30.7%)	-.18 (79)	.47 (172)	2.63 (104)	.96 (355)
Black and Hispanic (30.8-100%)	1.41 (13)	1.22 (93)	2.77 (31)	1.59 (137)
Total	-.05 (556)	.46 (760)	2.29 (282)	.60 (1598)

Furthermore, the 31 job titles in which Blacks, Hispanics, and women are overrepresented had the largest average predicted change in salary grade (2.77 grades). The 104 racially-integrated female-dominated job titles had the second largest mean increase in predicted salary grade (2.63 grades). In contrast, the 147 White female-dominated jobs averaged less of an increase in predicted salary grade (1.95 grades). This result suggests that, for Black and Hispanic women, the disadvantages imposed by sexism are added to those already incurred by racism, revealing what Almquist and Wehrle-Einhorn (1978) labelled the double disadvantage. Of the 13 job titles in which Blacks and Hispanics are overrepresented, but which are sex-integrated, we found an average undervaluation of 1.22 salary grades. For the 13 job titles which are male-dominated, but in which Blacks and Hispanics are overrepresented, we found an average undervaluation of almost one and a half salary grades (1.41 grades). Thus, if disproportionately Black and Hispanic jobs were paid according to the same compensation system as White male jobs, their salaries typically would be increased.

To determine why we find undervaluation of disproportionately Black and Hispanic job titles when applying the White male pay practices formula to obtain their equitable salary grades, we used the same ten job content characteristics which described pay for White male jobs to describe the salary grades of job titles in which Blacks and Hispanics were disproportionately located. Comparing the weights for each job content characteristic indicated whether each characteristic is an equally important determinant of salary grade for White male

and for disproportionately Black and Hispanic job titles. This comparison reveals differences in the relative importance of job content characteristics as a function of the title's racial/ethnic composition. Figure 2 describes the State's current pay practices formula for disproportionately Black and Hispanic job titles. A comparison of Figures 1 and 2 shows that the weights were not the same for disproportionately White male titles as for disproportionately Black and Hispanic titles.

FIGURE 2

New York State Pay Practices
for 137 Disproportionately Black and Hispanic Job Titles

Constant:	- 1.69	
	+10.02 x	Complexity of Writing Responsibilities
	+12.93 x	Education Required
	+ 9.40 x	Experience Required
	- 3.17 x	Unfavorable Working Conditions
	+ 4.85 x	Managerial/Supervisory Responsibilities
	+ 1.29 x	Amount of Communication with Public
	+ 1.15 x	Responsibility for Preventing Damage to Equipment
	+ 0.41 x	Group Facilitation Responsibilities
	+ 0.22 x	Seriousness of the Consequences of Error
	- 0.54 x	Working with Machines

Predicted Salary Grade

Specifically, education and experience are more important in determining the compensation of disproportionately Black and Hispanic jobs than of White male jobs. In addition, disproportionately Black and Hispanic jobs are penalized less than White male-dominated jobs for unfavorable working conditions. Disproportionately Black and Hispanic job titles receive higher pay for increased communication with the public, while White male-dominated jobs actually lose pay the more they require communication with the public. Both types of jobs receive almost the same rate of return for managerial/supervisory responsibilities.

In contrast, responsibility for preventing damage to equipment, group facilitation, consequences of error, working with machines, and complexity of writing responsibilities receive less compensation in disproportionately Black and Hispanic jobs than in White male jobs. In fact, the difference in the values for complexity of writing responsibilities may be the second most important reason explaining the undervaluation of disproportionately Black and Hispanic jobs. In short, the weights associated with all the job content characteristics, except managerial/supervisory responsibilities, are different for disproportionately Black and Hispanic titles than for White male titles, suggesting that New York State has different pay practices for jobs in which Blacks and Hispanics are overrepresented.

Furthermore, and perhaps most telling, the constants in the formulas are different. For disproportionately Black and Hispanic jobs the constant is negative (-1.69), while for White

male-dominated job titles it is positive (+2.14). This negative constant means that a White male title would receive a positive salary grade of just over 2 even if the job title involved none of the job content measured. The negative minimum salary grade for a disproportionately Black or Hispanic title which involved none of the job content measured suggests that employees would have to pay to work. Obviously, this would never be the case because every job title has at least a minimum amount of job content on one of the compensable characteristics listed in Figures 1 and 2.

Perhaps more than differences in the weights associated with job content, the constant measures the handicap with which disproportionately Black and Hispanic jobs start. For example, if a job title received the highest possible scores on management and supervision, education, group facilitation, consequences of error, complexity of writing, experience, and responsibility for preventing damage to equipment, but received the lowest possible scores on unfavorable working conditions, communication with the public, and working with machines, its appropriate salary grade if White male would be 44, and if disproportionately Black and Hispanic, 39.

In summary, this analysis indicates that differences in pay between White male-dominated and disproportionately Black and Hispanic titles averaging over one and a half salary grades are not based on appropriate differences in job content between White male-dominated and disproportionately Black and Hispanic titles, but on racial/ethnic (and sex) composition of job titles. White

male titles start almost two salary grades ahead of Black and Hispanic titles, before any job content is taken into consideration. These results suggest that disproportionately Black and Hispanic jobs are systematically undervalued.

Achieving Pay Equity for Blacks and Hispanics

One of the fundamental issues in pay equity analysis is whether titles of similar value, given their productivity-related job content, are equivalently paid under the employer's current compensation system. We found clear evidence that pay in New York State employment is distributed unevenly across jobs depending on the racial/ethnic characteristics of title incumbents. Our results show that, controlling for variation in the work performed, significant differences remain in salary grades. On average, disproportionately Black and Hispanic titles have lower salary grades than comparable White male-dominated titles. We found that New York State job titles which are filled both disproportionately by Blacks and Hispanics and disproportionately by females are the most undervalued. Specifically, for titles that are both disproportionately Black and Hispanic and disproportionately female, the average undervaluation is 2.77 salary grades. In other words, being in a job title which is disproportionately Black and Hispanic as well as female costs workers almost three salary grades or 15 percent of their salaries relative to workers in comparable White male titles.

Pay equity is a strategy for remedying such systematic undervaluation in female-dominated and disproportionately Black

and Hispanic jobs within a single employer. Given the extent that Black and Hispanic women and men hold jobs which are undervalued, they will benefit from pay equity adjustments which are made for those occupations. Thus, our results suggest that Blacks and Hispanics should gain from pay equity strategies.

Because of differences in the occupational distribution of Black, Hispanic, and White women, implementation of pay equity should have an especially positive impact on the wages of Black and Hispanic women in New York State. They should reap significant benefits because a disproportionate number of Black women work in the public sector, where most pay equity strategies currently are being implemented, and in typically female clerical jobs that are underpaid. As this analysis shows, race/ethnic and sex segregation results in lower wages for Black and Hispanic women. Implementation of pay equity offers one method for improving their wages.

Until recently pay equity has been seen as solely a women's issue, and most pay equity studies have not included "typically" Black and Hispanic male jobs in their analyses of undervaluation. Our results reveal pay inequities in job titles where Black and Hispanic males are heavily concentrated. Black and Hispanic men also gain from pay equity because they are more likely than White men to hold female-dominated jobs, perhaps because they have, in the past, been excluded from White male professional, managerial, and craft jobs. Researchers need to include race/ethnicity in other public sector and private sector job evaluation studies assessing wage inequities.

Scales-Trent (1984) recommends that Black and Hispanic women and men form alliances with White women to pursue pay equity strategies because it is another method for reducing their economic inequality, particularly those in female-dominated jobs. We concur. Pay equity should be part of a larger equal employment agenda for Blacks and Hispanics, an agenda which also continues to include eliminating job discrimination and affirmative action.

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CHAPTER III

A Case Study in Washington State

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A CASE STUDY IN WASHINGTON STATE

Chapter Summary

Helen Remick, Angela B. Ginorio, and Patricia Brtiz of the University of Washington conducted a study to determine if race, ethnicity, and sex affect the wages of people of color in Washington State. They used three sets of data for this analysis: a Washington State wage survey, job evaluation scores for the jobs included in the salary survey, and 1980 Census data. These sources provided market data by geographical region for specific jobs from a wide range of employers.

Although relatively small, the State's population of people of color is distributed throughout Washington State and is very diverse. Their occupational distribution is similar to that shown in the national data (See Chapter I). In the State workforce, women of color work in female-dominated occupations, but are further segregated into occupations dominated by women of color. Men of color likewise are segregated from White women and men. Similarly, the occupational concentrations of women and men of color mirror those patterns seen in the national data: people of color are concentrated in low-paying occupations.

This study indicates that wages are not only affected by market forces, but also by the race, ethnicity, and sex of individuals holding the job. The findings suggest that implementation of pay equity would eliminate race discrimination to some degree in Washington State. However, the analysis also points to the need to eliminate job segregation by increasing affirmative action efforts and other remedies.

I. Introduction

Washington State was the first employer to use job evaluations with the specific intent of determining whether the sex of the majority of workers in a job was related to the salary assigned to that job. This first study, in 1974, showed an average gap of about 20% in salaries assigned to male-dominated and female-dominated jobs. In these original studies race and ethnicity were not factors in part because of the demographics of Washington; at the time of the first study, people of color represented barely 5% of the total population. This percentage has nearly doubled in the ensuing ten years.

The diversity in the State's population must be noted; American Indians, Asian/Pacific Islanders, Blacks, and Hispanics all are present in significant numbers in the workforce. The distribution across the State of these groups varies widely. American Indians and Hispanics live primarily in rural areas. Many American Indians still live on reservations, most of which are located in rural areas, though some border urban centers. The Hispanic population is primarily located in the agricultural areas, where almost all are Chicanos (Mexican Americans). Asians and Blacks live in the urban areas; in fact, most Asians and Blacks in the State live within the city limits of Seattle, where they each comprise over 9% of the population. With the exception of Seattle, distribution patterns of Blacks appear heavily influenced by the presence of federal installations, usually military. In Seattle itself, in-migration patterns resemble those of other northern urban areas. The Asian population of Washington is diverse, with long-standing

populations of Chinese Americans and Japanese Americans, but also many Vietnamese, Filipinos, Laotians, Koreans, Cambodians, Samoans, and Hmong. (Washington State, primarily around Seattle and in the Tri-Cities area, is one of the major relocation centers for Southeast Asian refugees, and has the third largest Asian population in the United States.)

At the same time, several counties had few, if any, people of color living or working in them, and no county had high representation of all groups. For example, while the total American Indian representation in the workforce is only 1%, American Indians represent 15% of the workforce in one of the smaller counties. Hispanics represent from 0 to 20%, Blacks from 0 to 5%, and Asian/Pacific Islanders from 0 to 5% of the workforce of the various counties. While the overall representation of people of color was relatively low, the variation across regions of the State would be sufficient to allow us to analyze salary data for the effect of race and ethnicity and while the representation of people of color is still relatively low, the distribution of groups across the State presents some interesting possibilities for study. The Standard Occupation Codes (SOC) with the highest numbers and largest percentages of each race/ethnic and sex group are shown in Table 1. These patterns are very similar to national data (see Chapter I).

Table 1

WASHINGTON STATE 1980 CENSUS SOCS WITH LARGEST NUMBERS OF EACH ETHNIC/RACIAL GROUPS, BY SEX

LARGEST CATEGORIES CAUCASIAN MALES SOC	TITLE	NO. WKRS	CAUCASIAN FEMALES SOC	TITLE	NO. WKRS
19	Managers nec	55,569	313	Secretaries	59,183
804	Truck Drivers heavy	30,412	337	Bookkeepers	35,686
567	Carpenters	30,387	435	Waitresses	27,615
633	Supv Production	26,271	276	Cashiers	24,847
453	Janitors	24,091	156	Teachers Elem	23,224
259	Sales Reps wholesale	20,633	19	Managers nec	22,984
889	Laborers exc constr	18,743	274	Sales workers other	20,869
243	Supv sales occ	18,410	95	Nurses	20,755
558	Auto mechanics	14,517	436	Cooks ex short order	13,881
473	Farmers	13,367	447	Nursing aides	13,881
869	Constr. laborer	13,051	319	Receptionists	12,371
575	Electricians	12,646	468	Child care wkrs	11,343
783	Welders	11,651	315	Typists	10,421
479	Farm workers	11,402	453	Janitors	8,395
156	Teachers elem	11,194	458	Hairdressers	8,216
254	Real Estate sls	11,069	383	Bank tellers	7,932
637	Machinists	10,374	303	Supvs gen office	7,434
436	Cook exc short order	10,083	254	Real estate sls	7,286
13	Mgrs marketing adver	9,904	23	Accountants	6,968
TOTAL IN WORKFORCE		1,037,546	TOTAL IN WORKFORCE		725,990

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS
SOCS WITH HIGHEST PERCENTS OF EACH ETHNIC/RACIAL GROUP, BY SEX

CAUCASIAN MALES				CAUCASIAN FEMALES			
SOC	TITLE	PCT	NO. WKRS	SOC	TITLE	PCT	NO. WKRS
553	Supv brickmasons	100.0	91	204	Dental Hygienists	94.9	1124
655	Misc precision metal	100.0	18	445	Dental Assistants	93.0	4035
455	Pest control occup	100.0	264	326	Correspond. clerk	92.0	244
867	Helpers extract occups	100.0	79	313	Secretaries	92.5	59,183
654	Sheet metal apprentices	100.0	13	283	Demonstrators	90.8	258
617	Mining occups. nec	100.0	133	284	Proofreaders	90.7	340
489	Inspectors agricult.	100.0	21	95	Registered nurses	90.2	20,755
517	Farm equip. mech.	98.1	1,182	319	Receptionists	90.0	12,371
826	Rail vehicle operator	97.8	90	99	Occupat. therap	89.9	444
226	Airline pilots	97.5	2,485	406	Child care, priv	88.3	3,185
613	Supv extractive occups.	97.3	249	337	Bookkeepers	87.8	35,686
823	Railroad conductors	97.2	753	325	Classified ad clerks	86.4	299
509	Small engine repairers	97.0	1,050	468	Child care wkrs	86.4	11,343
284	Auctioneers	96.8	62	207	Lic practic nurses	86.3	6,548
615	Explosive workers	96.6	169	155	Teachers kinder	86.3	3,517
506	Auto mech apprentices	96.1	99	383	Bank tellers	85.8	7,932
544	Millwrights	95.9	3,404	314	Stenographers	85.1	1,106
46	Mining engineer	95.8	114	205	Health records techs	85.1	228
555	Supv electricians	95.8	1,063	315	Typists	85.0	10,421
557	Supv plumbers	95.6	544	405	Housekeepers	84.8	613
PCT OF TOTAL WORKFORCE		53.8		PCT OF TOTAL WORKFORCE		37.7	

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS SOCS WITH LARGEST NUMBERS OF EACH ETHNIC/RACIAL GROUPS, BY SEX

ASIAN MALES SOC	TITLE	NO. WKRS
19	Managers nec	1,294
436	Cooks ex short order	1,086
453	Janitors	967
44	Aerospace engin	522
444	Misc Food prep occups.	519
889	Laborers ex constr	511
23	Accountants	493
274	Sales wkrs other	488
783	Welders	451
785	Assemblers	404
486	Groundskeepers	383
435	Waiters	352
217	Drafting occups.	341
235	Technicians nec	312
59	Engineers nec	304
59	Engineers nec	304
64	Computer syst analysts	279
53	Civil engineers	273
19	Managers nec self-employed	236
55	Electrical eng	218
TOTAL IN WORKFORCE		24,893

ASIAN FEMALES SOC	TITLE	NO. WKRS
744	Textile sew mach ops	1,754
313	Secretaries	1,211
435	Waiters & Waitresses	996
337	Bookkeepers	785
276	Cashiers	755
156	Teachers elementary	630
379	Gen office clerks	628
95	Nurses	605
449	Maids & Housemen	586
447	Nursing aides	556
274	Sales workers other	509
385	Data entry keyers	497
444	Misc food prep occups.	475
315	Typists	440
436	Cooks ex short order	433
23	Accountants	433
785	Assemblers	360
453	Janitors	328
19	Managers nec	325
888	Hand Packers	285
TOTAL IN WORKFORCE		23,550

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS
SOCS WITH HIGHEST PERCENTS OF EACH ETHNIC/RACIAL GROUP, BY SEX

ASIAN MALES

SOC	TITLE	PCT	NO. WKRS
669	Shoe repairers	14.1	71
88	Podiatrists	12.7	16
713	Forging mach ops	12.1	17
667	Tailors	8.6	57
67	Statisticians	7.0	34
43	Architects	6.7	212
68	Math scientists	6.3	9
347	Office mach ops nec	6.3	37
789	Hand painting occs	6.2	63
83	Medical scientists	6.1	22
73	Chemists	5.9	71
48	Chemical engineers	5.8	59
233	Tool programmers	5.8	5
49	Nuclear engineers	5.8	33
678	Dental Lab Techs	5.6	73
44	Aerospace engin	5.6	522
59	Engineer nec	5.6	304
647	Jewelers	5.4	27
466	Baggage Porters	5.0	20
345	Postal Clerks	4.9	221
PCT OF TOTAL WORKFORCE		1.3	

ASIAN FEMALES

SOC	TITLE	PCT	NO. WKRS
744	Textile sewers	30.0	1,754
666	Dressmakers	20.0	264
784	Solderers	9.6	33
763	Roasting mach ops	9.5	11
667	Tailors	9.3	62
798	Production samplers	8.6	6
688	Food batchmakers	7.2	54
385	Data entry keyers	6.6	497
449	Maids	6.1	586
344	Billing mach ops	5.6	65
88	Podiatrists	5.6	7
343	Cost and rate clks	5.4	88
683	Electrial assemb	5.2	115
439	Kitchen workers	4.5	87
203	Clinical Lab techs	4.5	174
68	Match scientists	4.2	6
27	Personnel specs	4.2	174
748	Laundering mach	4.2	167
347	Office mach ops	4.1	24
329	Library clerks	3.9	126
PCT OF TOTAL WORKFORCE		1.2	

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS SOCS WITH LARGEST NUMBERS OF EACH ETHNIC/RACIAL GROUPS, BY SEX

BLACK MALES SOC	TITLE	NO. WKRS
453	Janitors	1,409
888	Laborers ex const	925
19	Managers nec	735
436	Cooks ex short order	456
779	Machine ops not spec	435
804	Truck drivers heavy	408
869	Construction laborer	405
783	Welders	357
785	Assemblers	356
633	Supv production	353
444	Misc food prep occups.	342
575	Electricians	324
808	Bus drivers	314
426	Security guards	294
567	Carpenters	290
174	Social workers	275
637	Machinists	235
883	Freight handlers	235
354	Postal clerks ex car	208
447	Nursing aides	205
TOTAL IN WORKFORCE		23,039

BLACK FEMALES SOC	TITLE	NO. WKRS
447	Nursing aides	1,069
313	Secretaries	968
453	Janitors	632
379	General office clerk	618
156	Teachers elementary	568
276	Cashiers	561
315	Typists	476
468	Child care wkrs	442
174	Social wkrs	403
337	Bookkeepers	394
274	Sales wkrs other	356
19	Managers nec	325
385	Data entry keyers	320
319	Receptionists	317
207	Lic practical nurses	315
435	Waitresses	310
449	Maids	308
436	Cooks ex short order	307
95	Registered nurses	254
27	Personnel specialist	245
TOTAL IN WORKFORCE		18,665

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS
SOCS WITH HIGHEST PERCENTS OF EACH ETHNIC/RACIAL GROUP, BY SEX

BLACK MALES			BLACK FEMALES		
SOC TITLE	PCT	NO. WKRS	SOC TITLE	PCT	NO. WKRS
466 Baggage porters	19.5	78	738 Winding mach ops	16.1	29
725 Misc metal proc mach	14.7	33	377 Eligibility clerks	9.9	16
659 Misc precis woodwkrs	9.6	7	67 Statisticians	9.2	45
717 Fabricating mach ops	7.6	87	425 Crossing guards	9.0	19
483 Marine Life cultiv	7.5	8	405 Housekeepers	7.5	54
875 Garbage Collectors	7.1	60	193 Dancers	7.4	15
424 Corrections Inst ofc	6.9	112	747 Pressing mach ops	6.3	65
425 Crossing Guards	6.2	13	404 Cooks Prvt Househld	6.2	10
834 Bridge Tenders	6.1	11	447 Nursing aides	5.7	1,069
193 Dancers	5.9	12	345 Duplicating mach ops	5.7	30
415 Supvs Guards	5.6	28	374 Material record Clks	5.0	41
588 Concrete finishers	5.6	100	97 Dieticians	4.6	41
596 Sheetmetal wkrs	5.5	27	407 Private hshld clean	4.6	205
644 Patternmakers	5.4	22	174 Social workers	4.4	403
448 Supvs cleaning svc	5.3	144	467 Welfare svc aides	4.3	54
199 Athletes	5.1	62	385 Data entry keyers	4.3	320
614 Drillers oil well	5.0	6	357 Messengers	4.2	54
757 Separating mach ops	5.0	48	207 Lic Practical nurse	4.2	315
636 Precision assemblers	5.0	39	347 Office mach ops nec	4.1	24
675 Hand molders	4.9	31	344 Billing mach ops	4.0	47
PCT OF TOTAL WORKFORCE	1.2		PCT OF TOTAL WORKFORCE	1.2	

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS SOCS WITH LARGEST NUMBERS OF EACH ETHNIC/RACIAL GROUPS, BY SEX

HISPANIC MALES SOC	TITLE	NO. WKRS
479	Farm workers	5,760
453	Janitors	1,186
889	Laborers ex const	882
804	Truck drivers hea	797
19	Managers nec	740
567	Carpenters	650
869	Constr laborer	502
779	Machine ops not spec	490
633	Supvs production oc	455
856	Idust truck ops	396
486	Groundskeepers	381
785	Assemblers	380
783	Welders	376
436	Cooks ex short or	337
883	Freight handlers	298
444	Misc Food prep occ	278
888	Hand Packers	269
686	Butchers	262
877	Stock handlers	249
777	Misc machine ops	236
TOTAL IN WORKFORCE		29,913

HISPANIC FEMALES SOC	TITLE	NO. WKRS
479	Farm workers	1,584
313	Secretaries	1,133
435	Waitresses	719
276	Cashiers	641
337	Bookkeepers	496
799	Graders exc agri	467
447	Nursing aides	445
274	Sales workers other	443
156	Teachers elementary	423
468	Child care workers	416
436	Cooks ex short order	402
379	Gen office clerks	380
453	Janitors	362
888	Hand packers	343
315	Typists	342
785	Assemblers	315
319	Receptionists	312
19	Managers nec	312
444	Misc food prep oocs	270
449	Maids	242
TOTAL IN WORKFORCE		18,946

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS
SOCS WITH HIGHEST PERCENTS OF EACH ETHNIC/RACIAL GROUP, BY SEX

HISPANIC MALES

SOC	TITLE	PCT	NO. WKRS
635	Tool and die apprent	30.0	9
479	Farm workers	24.6	7,344
477	Supvs farm workers	15.7	229
484	Nursery wkrs agri	15.1	224
656	Patternmakers wood	11.1	4
763	Roasting machine ops	10.3	12
214	Indust engin techs	9.4	12
728	Shaping mach ops	9.4	19
725	Misc metal proc mach	8.9	20
647	Jewelers	8.2	39
745	Shoe machine ops	7.9	5
366	Meter readers	7.3	47
717	Fabricating mach ops	5.7	65
686	Butchers	5.6	262
756	Mixing mach ops	5.1	55
565	Tile setters	5.1	29
875	Garbage collectors	5.0	42
169	Social scientists	5.0	11
636	Precision assemblers	4.7	37
757	Separating machine op	4.5	43
PCT OF TOTAL WORKFORCE		1.6	

HISPANIC FEMALES

SOC	TITLE	PCT	NO. WKRS
403	Launderers	25.0	8
795	Misc hand working	12.6	82
488	Graders agr prods	11.5	116
793	Hand engraving	10.0	5
377	Eligibility clerk	8.7	14
659	Misc precision wood worker	8.2	6
799	Graders exc agri	6.9	467
479	Farm workers	6.8	1,584
353	Commun equip ops	6.7	21
679	Bookbinders	6.5	25
754	Packing mach ops	6.4	130
193	Dancers	6.4	13
739	Knitting mach ops	4.6	13
155	Teachers kinder	4.4	181
667	Tailors	4.4	29
387	Teachers' aides	4.2	241
223	Biological techs	3.9	31
888	Hand packers	3.8	343
316	Interviewers	3.5	109
764	Washing mach ops	3.4	6
PCT OF TOTAL WORKFORCE		1.0	

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS SOCS WITH LARGEST NUMBERS OF EACH ETHNIC/RACIAL GROUPS, BY SEX

NATIVE AMERICAN MALES SOC	TITLE	NO. WKRS
453	Janitors	508
889	Laborers ex const	506
804	Truck drivers heavy	420
869	Construction labor	380
19	Managers nec	369
567	Carpenters	362
479	Farm workers	353
496	Timber cutting	348
498	Fishers	330
486	Groundskeepers	264
783	Welders	247
856	Indus truck ops	225
436	Cooks ex short or	219
883	Freight handlers	205
444	Misc food prep occups.	176
418	Police public serv	165
633	Supvs production	162
575	Electricians	147
727	Sewing mach ops	131
585	Plumbers	129
TOTAL IN WORKFORCE		13,172

NATIVE AMERICAN FEMALES SOC	TITLE	NO. WKRS
313	Secretaries	703
449	Maids	586
447	Nursing aides	448
337	Bookkeepers	346
435	Waitresses	337
276	Cashiers	331
436	Cooks ex short order	310
379	Gen office clerks	259
468	Child care wkrs	211
453	Janitors	207
95	Nurses	187
315	Typists	184
274	Sales workers other	176
19	Managers nec	171
174	Social workers	168
156	Teachers elementary	167
319	Receptionists	162
444	Misc food prep occups.	135
207	Lic practical nurses	127
387	Teachers' aides	123
TOTAL IN WORKFORCE		10,074

(Cont'd Table 1)

WASHINGTON STATE 1980 CENSUS
SOCS WITH HIGHEST PERCENTS OF EACH ETHNIC/RACIAL GROUP, BY SEX

NATIVE AMERICAN MALES				NATIVE AMERICAN FEMALES			
SOC	TITLE	PCT	NO. WKRS	SOC	TITLE	PCT	NO. WKRS
798	Production samplers	12.9	9	743	Textile cutting mach	11.6	8
483	Marine life cultivs	10.4	11	403	Launderers	9.4	3
498	Fishers	8.3	330	499	Hunters & Trappers	9.3	9
848	Hoist & winch ops	7.5	41	193	Dancers	3.4	7
616	Mining mach ops	7.2	16	467	Welfare svc aides	3.3	41
594	Paving equip ops	6.5	10	753	Cementing mach ops	3.2	25
495	Forestry wkrs exc lo	6.0	118	725	Misc metal mach ops	3.1	7
614	Drillers oil well	5.9	7	205	Health records techs	3.0	8
466	Baggage porters	5.5	22	158	Teachers spec ed	2.9	15
497	Captains fishing ves	5.5	33	447	Nursing aides	2.7	448
569	Carpenter apprents	5.3	29	463	Guides	2.4	7
675	Hand molders	4.4	28	425	Crossing guards	2.4	5
855	Grader operators	4.4	58	466	Baggage porters	2.3	9
587	Plumber apprents	4.4	18	353	Comm equip ops nec	2.2	7
485	Supvs agri occ	4.4	24	647	Jewelers	2.2	11
725	Misc metal mach ops	4.0	9	449	Maids	2.2	211
477	Supvs farm workers	4.0	58	387	Teachers' aides	2.2	123
833	Marine engineers	3.9	16	175	Recreation workers	2.1	21
285	Sales support occs	3.9	7	795	Misc hand work	2.0	13
538	Office mach repairer	3.8	33	406	Child care wkrs priv	1.9	70
PCT OF TOTAL WORKFORCE		0.7		PCT OF TOTAL WORKFORCE		0.5	

II. Data

Three sets of data formed the basis of this study: a Washington State wage survey, job evaluation scores for these jobs, and the 1980 census. By statute Civil service salaries are set in relationship to prevailing wages throughout the State. In order to implement this law, the State civil service systems (1) have designated a limited number of the jobs in their systems as "benchmarks." These benchmarks are jobs at the experienced worker level which are representative of larger numbers of jobs in the civil service systems and which are found in other employment settings. On a biennial basis the State surveys other employers to determine what wages are paid to employees performing work in the benchmark categories. This survey process gives us market data by geographical region for specific jobs from a wide range of employers. Market data are important for testing economic theories of how wages are determined. Economic theory holds that wages are set by the supply of workers and the demand for their work, not by such factors as the race/ethnicity or sex of the workers themselves.

Because of the State's pay equity studies, for each of the benchmark positions there is available a job evaluation score, indicating the overall effort, skill, responsibility, and working conditions of the job as measured by the Willis system. These latter scores make possible the analysis of salary data taking into account the characteristics of the job.

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(1) Higher Education Personnel Board, also known as HEPB, for higher education employees and Department of Personnel, DOP, for all other employees.

Data were not directly available on the race/ethnicity and sex of persons included in the salary survey data. To approximate the distribution for the benchmarks, each benchmark was matched to a 1980 census category, known as an Standard Occupation Code (SOC). In several cases two benchmarks matched to the same SOC (e.g., Secretary and Secretary-Shorthand both fell under the census category of Secretary); when this happened, we averaged the salary data for the two benchmark jobs and assigned the average to that SOC. This process created a data set where a benchmark job, its average prevailing salary, and its job evaluation score were seen as representative of all persons in the appropriate SOC.

We found that our benchmark positions were skewed to jobs found in towns more than rural areas and that some of our counties did not have large enough work forces (some totalled barely 1,000) or towns to have provided the State with salary data for its benchmarks. We combined the less populous counties into larger regions; in order to be combined, the counties needed to be contiguous and to have similar population distributions by sex, race, and ethnicity. This yielded seventeen regions. Even after this exercise, some regions did not offer enough benchmarks with corresponding salary data to be analyzed, and some benchmarks were not found in enough regions (we required at least seven) to allow for analysis.

Our nine remaining regions, nonetheless, represented approximately 95% of the State's total population, and the workers in the SOCs matching the benchmarks represented 19.2% of

the State's total workforce. Further, the SOCs representing the benchmarks have high representation in the 20 jobs with the greatest number of workers for each race, ethnic, and sex group. The benchmarks include 10 of the top 20 jobs for Black females, 8 of the top 20 for Asian males, Asian females, Native American females, and Caucasian females; 7 for Native American males, 6 for Black males and Hispanic females, and 5 for Hispanic and Caucasian males. The map (Figure 1) indicates the regions in the State included in the study, and Tables 2 and 3 show the workforce distributions associated with the sample of SOCs used in the final analysis.

Figure 1: Map of Regions Included in Washington State Study

Table 2

DISTRIBUTION WITHIN SAMPLE BY RACE/ETHNICITY AND SEX

Number of Persons

Region	Asian		Black		Hispanic		American Indian		Total People of Color		Caucasian		Overall Total
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	
Greater Southwest	137	240	87	80	331	296	143	193	693	809	20769	17573	39344
Tacoma	776	604	1184	1091	470	397	226	246	2656	2338	21662	17419	44075
Bremerton	214	111	127	105	122	153	115	61	578	430	6653	5363	13024
Everett	338	166	103	79	269	183	200	190	910	818	18923	14935	35586
Greater Northwest	99	97	36	48	162	218	209	129	506	492	10393	8109	19500
Tri-Cities	66	78	88	45	136	215	56	18	346	356	6392	5442	12536
Spokane	764	738	179	289	195	211	216	166	854	904	18764	14475	34997
Yakima	77	60	31	115	531	852	296	331	935	1358	7106	5314	14713
Seattle	4404	4407	3437	3373	1632	1605	755	716	10723	10046	77251	58514	156034
SAMPLE TOTAL	6370	6196	5267	5175	3848	4130	2216	2050	17701	17551	187413	147144	369809
STATE TOTAL	23550	24893	19665	23039	18946	29913	10074	13172	71235	91017	726739	1039640	1927631
SAMPLE AS % STATE	27.0	24.9	26.7	22.5	20.3	13.8	22.0	15.6	24.8	19.3	25.8	14.2	19.2

Horizontal percent

Greater Southwest	0.3	0.6	0.2	0.2	0.8	0.8	0.4	0.5	1.8	2.1	51.5	44.7	100.0
Tacoma	1.8	1.4	2.7	2.5	1.1	0.9	0.5	0.6	6.0	5.3	49.1	39.5	100.0
Bremerton	1.6	0.9	1.0	0.8	0.9	1.2	0.9	0.5	4.4	3.3	51.1	41.2	100.0
Everett	0.9	1.0	0.3	0.2	0.8	0.5	0.6	0.5	2.6	2.3	53.2	42.0	100.0
Greater Northwest	0.5	0.5	0.2	0.2	0.8	1.1	1.1	0.7	2.6	2.5	53.3	41.6	100.0
Tri-Cities	0.5	0.6	0.7	0.4	1.1	1.7	0.4	0.1	2.8	2.8	51.0	43.4	100.0
Spokane	0.8	0.7	0.5	0.8	0.6	0.6	0.6	0.5	2.4	2.6	53.6	41.4	100.0
Yakima	0.5	0.4	0.2	0.8	3.6	5.8	2.0	2.2	6.4	9.2	48.3	36.1	100.0
Seattle	2.8	2.8	2.2	2.1	1.0	1.0	0.5	0.5	6.6	6.4	49.5	37.5	100.0
SAMPLE TOTAL	1.7	1.7	1.4	1.4	1.0	1.1	0.6	0.6	4.8	4.7	50.7	39.8	100.0
STATE TOTAL	1.2	1.3	1.0	1.2	1.0	1.6	0.5	0.7	3.7	4.7	37.7	53.9	100.0

Table 3

DISTRIBUTION WITHIN SAMPLE BY RACE/ETHNICITY

Number of Persons

	Asian	Black	Hisp.	Amer Ind.	Total People of Color	Cauc	Overall Total
Greater Southwest	372	167	627	336	1,502	37,842	39,344
Tacoma	1,380	2,275	867	472	4,994	39,081	44,075
Bremerton	325	232	275	176	1,008	12,016	13,024
Everett	704	182	452	390	1,728	33,858	35,586
Greater Northwest	196	84	380	338	998	18,502	19,500
Tri-Cities	144	133	351	74	702	11,834	12,536
Spokane	502	468	406	382	1,758	33,239	34,997
Yakima	137	146	1,383	627	2,293	12,420	14,713
Seattle	8,806	6,755	3,237	1,471	20,269	135,765	156,034
SAMPLE TOTAL	12,566	10,442	7,978	4,266	35,252	334,557	369,809
STATE TOTAL	48,443	41,704	48,859	23,246	162,252	1,765,379	1,927,631
Sample as % State	25.9	25.0	16.3	18.4	21.7	19.0	19.2

Horizontal Percent

Greater Southwest	0.9	0.4	1.6	0.9	3.8	96.2	100.0
Tacoma	3.1	5.2	2.0	1.1	11.3	88.7	100.0
Bremerton	2.5	1.8	2.1	1.4	7.7	92.3	100.0
Everett	2.0	0.5	1.3	1.1	4.9	95.1	100.0
Greater Northwest	1.0	0.4	1.9	1.7	5.1	94.9	100.0
Tri-Cities	1.1	1.1	2.8	0.6	5.6	94.4	100.0
Spokane	1.4	1.3	1.2	1.1	5.0	95.0	100.0
Yakima	0.9	1.0	9.4	4.3	15.6	84.4	100.0
Seattle	5.6	4.3	2.1	0.9	13.0	87.0	100.0
SAMPLE TOTAL	3.4	2.8	2.2	1.2	9.5	90.5	100.0
STATE TOTAL	1.2	2.2	2.5	1.2	8.4	91.6	100.0

Tables 4 and 5 list the SOCs, the points and average salary associated with the benchmarks and the population distribution for the SOCs for the nine regions. The State benchmarks relatively undersample Hispanic and Caucasian males and relatively oversample Asians and Blacks and Caucasian females. The final data set included 37 jobs and, for each job, an average salary and the percent of people of color and Caucasians by sex for each of the nine regions.

Table 4

SAMPLE DISTRIBUTION BY RACE/ETHNICITY AND SEX

Number of persons

SOC	Title	Points	Number Regions	Average Salary	Asian		Black		Hispanic		Amer. Indian		Total People of Color		Caucasian		Overall	
					Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
7	Fiscal Manager	560	9	2967	51	100	19	36	9	30	19	17	98	178	2434	4687	2532	4860
23	Accountant/Auditor	300	9	2027	401	446	128	152	130	92	57	67	716	757	5975	8581	6691	9338
27	Personnel Officer	410	8	2640	160	165	278	149	94	95	33	43	515	452	7812	2492	3327	2944
33	Buyer	282	9	2161	0	32	0	14	24	28	0	18	24	92	202	415	226	507
53	Civil Engineer	294	9	2835	7	250	0	47	0	32	0	45	7	374	198	4371	205	4745
64	Syst. Analyst Programmer	384	8	2454	64	257	18	37	15	69	9	13	106	376	1086	3603	1192	3979
73	Chemist	277	7	2286	40	58	7	9	6	0	0	0	53	67	192	647	245	714
95	Registered Nurse	358	9	1891	585	17	244	34	209	29	152	0	1190	80	18405	903	19595	983
96	Pharmacist	284	8	2654	60	113	23	16	12	19	12	4	107	152	600	1503	707	1655
103	Physical Therapist	259	8	2108	0	2	0	0	13	8	0	0	13	10	557	175	570	185
203	Medical Technician	210	8	1810	174	46	94	77	41	27	22	0	331	100	2240	633	2571	733
207	Lic. Practical Nurse	187	9	1337	63	0	309	32	117	0	100	14	589	46	5493	285	6082	331
213	Electronics Tech.	259	9	2037	4	206	27	62	14	84	5	17	50	364	450	4101	500	4465
217	Drafting Tech.	145	9	1827	69	334	34	134	49	129	16	34	168	631	1542	5046	1710	5677
218	Civil Eng. Tech.	148	9	1883	0	13	0	10	0	11	0	32	0	66	70	821	70	887
229	Design Programmer	334	9	2093	69	172	33	32	29	64	5	23	136	291	1340	3433	1476	3724
308	Computer Operator	162	9	1558	174	54	125	47	79	61	43	10	371	172	3688	2043	4059	2215
313	Secretary	192	9	1356	1139	19	920	23	921	18	519	16	3499	76	51940	544	55439	620
315	Clerk Typist/word proc.	140	9	1238	426	37	467	16	301	28	110	11	1304	87	8586	751	9890	338
329	Library Technician	155	9	1717	104	31	67	20	76	12	10	9	257	72	2030	318	2287	390
337	Bookkeeper	142	9	1351	763	172	380	45	422	49	282	17	1847	283	30660	2258	32507	2541
359	Emergency Dispatcher	198	9	1618	6	21	26	20	4	9	15	0	51	50	679	1265	730	1315
379	Intermediate Clerk	122	9	1110	605	169	585	102	353	103	250	75	1793	399	13435	2277	15228	2676
385	Data Entry Operator	126	9	1235	479	23	303	6	109	19	48	0	939	48	5224	447	6163	495
418	Police Officer	186	8	1970	0	78	20	63	6	104	5	57	31	302	216	3410	247	3717
426	Security Guard	122	8	1217	20	140	30	286	40	103	8	69	98	598	1196	4614	1294	5212
436	Cook	156	9	1179	394	1053	296	425	312	293	218	192	1220	1963	11781	8852	12501	10815
453	Custodian	101	9	1203	307	862	571	1329	271	960	146	359	1295	3510	6923	20470	8218	23980
486	Gardener	127	9	1387	23	371	14	181	9	267	5	191	51	1005	1033	6351	1084	7356
516	Heavy Equip. Mech.	209	9	2134	6	43	0	38	0	56	0	24	6	161	21	2840	27	3001
575	Maint. Electrician	197	9	2280	7	156	10	319	0	134	6	97	23	706	263	10334	286	11040
567	Maint. Carpenter	197	9	2138	0	18	0	37	0	27	0	15	0	97	166	1713	166	1810
696	Stationary Engineer	175	8	2130	0	23	0	28	6	52	0	14	6	117	36	1577	42	1694
734	Offset press Operator	160	9	1689	29	69	45	110	7	72	19	32	100	283	844	3006	944	3289
805	Delivery Truck Driver	120	9	1709	0	122	11	166	33	155	9	71	53	514	1091	8203	1144	8717
856	Heavy Equip. Operator	181	9	2309	0	36	10	158	0	267	5	141	15	602	278	6400	293	7002
889	Laborer/Warehouse Wkr.	97	9	1508	160	437	214	899	144	629	59	378	577	2338	3324	16231	3901	18569

Table 5

SAMPLE DISTRIBUTION BY RACE/ETHNICITY AND SEX

Horizontal Percent

SOC	Title	Points	Number Regions	Average Salary	Asian		Black		Hispanic		Amer. Indian		Total People of Color		Caucasian		Overall	
					Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
7	Fiscal Manager	560	9	2967	0.7	1.4	0.3	0.5	0.1	0.4	0.3	0.2	1.3	2.4	32.9	63.3	34.3	65.7
23	Accountant/Auditor	300	9	2027	2.5	2.8	0.8	0.9	0.8	0.6	0.4	0.4	4.5	4.7	37.3	53.5	41.7	58.3
27	Personnel Officer	410	8	2640	2.6	2.6	3.6	2.4	1.5	1.5	0.5	0.7	8.2	7.2	44.8	39.7	53.1	46.9
33	Buyer	282	9	2161	0.0	4.4	0.0	1.9	3.3	3.8	0.0	2.5	3.3	12.6	27.6	56.6	30.8	69.2
53	Civil Engineer	294	9	2835	0.1	5.1	0.0	0.9	0.0	0.6	0.0	0.9	0.1	7.6	4.0	88.3	4.1	95.9
64	Syst. Analyst Programmer	384	8	2454	1.2	5.0	0.3	0.7	0.3	1.3	0.2	0.3	2.0	7.3	21.0	69.7	23.1	76.9
73	Chemist	277	7	2286	4.2	6.0	0.7	0.9	0.6	0.0	0.0	0.0	5.5	7.0	20.0	67.5	25.5	74.5
95	Registered Nurse	358	9	1891	2.8	0.1	1.2	0.2	1.0	0.1	0.7	0.0	5.8	0.4	89.4	4.4	95.2	4.8
96	Pharmacist	284	8	2654	2.5	4.8	1.0	0.7	0.5	0.8	0.5	0.7	4.5	6.4	25.4	63.6	29.9	70.1
103	Physical Therapist	259	8	2108	0.0	0.3	0.0	0.0	1.7	1.1	0.0	0.0	1.7	1.3	73.8	23.2	75.5	24.5
203	Medical Technician	210	8	1810	5.3	1.4	2.8	0.8	1.2	0.8	0.7	0.0	10.0	3.0	67.8	19.2	77.8	22.2
207	Lic. Practical Nurse	187	9	1337	1.0	0.0	4.8	0.5	1.8	0.0	1.6	0.2	9.2	0.7	85.7	4.4	94.8	5.2
213	Electronics Tech.	259	9	2037	0.1	4.1	0.5	1.2	0.3	1.7	0.1	0.2	1.0	7.3	9.1	82.6	10.1	89.9
217	Drafting Tech.	145	9	1827	0.9	4.5	0.5	1.8	0.7	1.7	0.2	0.5	2.3	8.5	20.9	68.3	23.1	76.9
218	Civil Eng. Tech.	148	9	1883	0.0	1.4	0.0	1.0	0.0	1.1	0.0	3.3	0.0	6.9	7.3	85.8	7.3	92.7
229	Design Programmer	334	9	2093	1.3	3.3	0.6	0.6	0.6	1.2	0.1	0.4	2.6	5.6	25.8	66.0	28.4	71.6
308	Computer Operator	167	9	1558	2.0	0.9	2.0	0.7	1.3	1.0	0.7	0.2	5.9	2.7	58.8	32.6	64.7	35.3
313	Secretary	192	9	1356	2.0	0.0	1.6	0.0	1.6	0.0	0.9	0.0	6.2	0.1	92.7	1.0	98.9	1.1
315	Clerk Typist/word proc.	140	9	1238	4.2	0.3	4.6	0.2	2.9	0.3	1.1	0.1	12.7	0.9	83.9	2.5	96.7	3.3
329	Library Technician	155	9	1217	3.9	1.2	2.5	0.2	2.8	0.4	0.4	0.3	9.6	2.2	75.8	11.9	85.4	14.6
337	Bookkeeper	147	9	1351	2.2	0.5	1.1	0.1	1.2	0.1	0.8	0.0	5.3	0.8	87.5	6.4	92.7	7.3
359	Emergency Dispatcher	198	9	1618	0.3	1.0	1.3	1.0	0.2	0.4	0.2	0.0	2.5	2.4	33.2	61.9	35.7	64.3
379	Intermediate Clerk	122	9	1110	3.4	0.9	3.3	0.6	2.0	0.6	1.4	0.1	10.0	2.2	75.0	12.7	85.1	14.9
385	Data Entry Operator	126	9	1235	2.2	0.3	4.6	0.1	1.6	0.3	0.2	0.0	14.1	0.2	78.5	6.2	92.6	7.4
418	Police Officer	186	8	1970	0.0	2.0	0.5	1.6	0.2	2.6	0.1	1.4	0.8	7.6	5.5	86.1	6.2	93.8
426	Security Guard	122	8	1217	0.3	2.2	0.5	4.4	0.6	1.6	0.1	1.1	1.5	9.2	18.4	70.9	19.9	80.1
436	Cook	156	9	1179	1.2	4.5	1.3	1.8	1.3	1.3	0.9	0.8	5.2	8.4	48.4	38.0	53.6	46.4
453	Custodian	101	9	1203	1.0	2.2	1.8	4.1	0.8	3.0	0.5	1.1	4.0	10.9	21.5	63.6	25.5	74.5
486	Gardener	122	9	1382	0.3	4.4	0.2	2.1	0.1	3.1	0.1	2.3	0.6	11.9	12.2	75.2	12.8	87.2
516	Heavy Equip. Mech.	209	9	2134	0.2	1.4	0.0	1.3	0.0	1.8	0.0	0.8	0.2	5.3	0.7	93.8	0.9	99.1
575	Maint. Electrician	197	9	2280	0.1	1.4	0.1	2.8	0.0	1.2	0.1	0.9	0.2	6.2	2.3	91.2	2.5	97.5
657	Maint. Carpenter	197	9	2138	0.0	0.9	0.0	1.9	0.0	1.4	0.0	0.8	0.0	4.9	8.4	86.7	8.4	91.6
696	Stationary Engineer	175	8	2130	0.0	1.3	0.0	1.6	0.3	3.0	0.0	0.8	0.3	6.7	2.1	90.8	2.4	97.6
734	Offset press Operator	160	9	1689	0.7	1.6	1.1	2.6	0.2	1.7	0.4	0.8	2.4	6.7	19.9	71.0	22.3	77.7
805	Delivery Truck Driver	170	9	1709	0.0	1.2	0.1	1.7	0.3	1.6	0.1	0.7	0.5	5.2	11.1	83.2	11.6	88.4
856	Heavy Equip. Operator	181	9	2309	0.0	0.5	0.1	2.2	0.0	3.7	0.1	1.9	0.2	8.3	3.8	87.7	4.0	96.0
889	Laborer/Warehouse Wkr.	97	9	1508	0.7	1.9	1.0	4.0	0.6	2.8	0.3	1.7	2.6	10.4	14.8	72.2	17.4	82.6

III. Method of Analysis and Findings

As with the other studies presented in this volume, analysis was done using multiple regression techniques. Multiple regression is a statistical technique complicated enough that it did not come into wide use until computers were easily accessible. It is very important in the social sciences because it allows one to look at a complex data set, with many variables, and to determine which variables are contributing to the observed outcome. In this study, for example, we know what salaries are for different jobs in various regions of the State. We wanted to find out what part of the differences in wages that we observed was due to: differences in overall wage structure in rural areas as opposed to urban areas (i.e., the cost of living is higher in larger cities, and wages for everyone tend to be higher than in low cost areas); inherent differences between jobs, having to do with the amount of effort, skill, responsibility, and difficult working conditions present; and how much was due to differences in the race/ethnicity and sex of the workers in the various regions and across jobs. Regression techniques sort out the effects and give us a measure of whether any of these factors "significantly" affect the salary. (2)

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(2) Statistical significance is said to exist when the probability is low that an outcome could occur by chance alone. That is, if it is likely that we would get a given result less than five times out of a hundred tries, we say that the result is not significant. Only if it is likely to occur more than five times out of a hundred do we accept the effect as likely to be real and not an artifact of chance.

The values of several of the variables were mathematically altered for the analysis. A "logarithmic transformation" (abbreviated as "log") of the salary and points was done to allow us to analyze for the effect of percent changes in these variables as opposed to absolute changes. That is, we could then measure the effect of a 2% change in number of points as opposed to a 10-point change.

Following is a description of the steps we took in analyzing these data. Since the procedures were fairly complicated, we will discuss findings along with methods. All analyses are on salaries for job categories, not for individuals.

1. Calculation of the effect upon salary of race/ethnicity and sex.

Researchers testing for discrimination often use a model where the possible basis of discrimination is the focus of the analysis. Using this approach, we tested for the effect of race/ethnicity and sex on wages, also taking into account regional differences and the point value of the benchmark jobs. (3) Points were assumed to measure the value of jobs as indicated by the overall effort, skill, responsibility, and working conditions involved; some measure of the difficulty of work is needed in order to separate differences in wages due to some groups choosing or being assigned to "easier" work from differences caused by race, ethnicity, and sex themselves. Results indicate that several of the regions had wage structures significantly different from the Seattle area, and all paid lower. (See Appendix 1 for the regression details.) Points were highly related to salaries. We also found that the greater the percent of Black or Asian males or Caucasian females employed in a given category, the lower the wages were, even after regional differences and job difficulty were taken into account. (4)

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(3) We used a regression analysis of the log of salary against variables for region, log of points, and percents for race/ethnic and sex groups.

(4) All relationships reported in this chapter are statistically significant. See the appendices for statistical data.

That is, for every increase of 1% in the proportion of Black

males in an SOC category, salary dropped an average of 1.7%, for each 1% increase of Asian males it dropped 1.2%, and for each 1% increase in Caucasian females it dropped 0.4%. By themselves, women of color did not show significant effects; the effect of sex was strongest and was overpowered by the Caucasian female factor.

This approach to analysis is not seen by economists as addressing economic theory, which assumes that wages are set solely through "market forces." According to that theory, wage differences might lie in the jobs "chosen" disproportionately by the various groups, rather than in race and sex.
To answer the questions of economic theory, we proceeded to more complicated analyses.

2. Calculation of the effect upon salary of race/ethnicity and sex on wages, taking into account market forces.

This analysis has several parts. It is designed to look at the relative values of jobs as paid by the market, then to test whether race, ethnicity, and sex are related to this relative value. We abstracted from our original data a new measure of the relative salaries of one job to another ("market coefficients") and made this measure the basis of further analysis.

We first tested to see how much of this difference was inherent in differences in wages among the jobs themselves and how much was due to regional and race/ethnic and sex differences. This test showed that the most important differences were those between the jobs themselves and across regions; none of the race/ethnic and sex groups were, by themselves, significantly

related to wages. That is, the differences among jobs were greater than the differences caused by varying percents of race/ethnicity and sex. (See Appendix 2 for regression details.) Since most jobs are not held by people of color and Caucasians, and by men and women proportionate to their workforce participation (i.e., most jobs are segregated or held disproportionately by one group or another), we next needed to test for the effect of this segregation on wages.

We eliminated the effect of regional differences from our data and created a market coefficient for each job. Since race, ethnicity, and sex were not significant in the previous analysis, in the next step any effect they might have was allowed to associate with the coefficient for each job. The coefficients represent the relative salary of each category, absent regional effects, and are shown in Table 6. (See Appendix 3 for regression details.) We had chosen the Warehouse worker/laborer as the job to serve as the basis of comparison, because this job had the lowest number of job evaluation points. Jobs with positive coefficients are valued more than a Warehouse worker/laborer by the market, and those with negative coefficients are valued less. If the market value had agreed perfectly with the point evaluation system, all jobs would have had positive coefficients. (Appendix 3)

TABLE 6
MARKET COEFFICIENTS AND JOB EVALUATION

Job Title	Standard Occupation Code (SOC)	Market Coefficients	Job Evaluation Points
Fiscal Manager	7	0.679	560
Civil Engineering Program Mgr	53	0.635	294
Pharmacist	96	0.572	284
Personnel Officer	77	0.563	410
Systems Analyst Programmer	64	0.494	384
Heavy Equipment Operator	856	0.420	181
Maintenance Electrician	575	0.414	197
Chemist	73	0.404	277
Buyer	33	0.362	282
Maintenance Carpenter	567	0.351	197
Physical Therapist	103	0.341	259
Heavy Equipment Mechanic	516	0.341	209
Stationary Engineer	696	0.334	175
Design Programmer	229	0.321	334
Electronics Technician	213	0.301	259
Auditor	23	0.300	300
Police Officer	418	0.261	186
Registered Nurse	95	0.230	358
Civil Engineering Technician	218	0.211	148
Drafting Technician	217	0.189	145
Medical Technician (ASCP)	203	0.186	210
Truck Driver	805	0.120	120
Offset Press Operator	734	0.085	160
Emergency Dispatcher	359	0.065	198
Computer Operator	308	0.035	162
Warehouse/Laborer	889	0.000	97
Gardener	486	-0.089	127
Secretary/Secretary, Shorthand	313	-0.103	192
Bookkeeper	337	-0.105	142
Licensed Practical Nurse(LPN)	207	-0.116	187
Word Processor Op./Clerk Typist	315	-0.198	140
Data Entry Operator	385	-0.200	126
Library Technician	329	-0.218	155
Custodian	453	-0.227	101
Cook	436	-0.245	156
Security Guard	426	-0.251	122
Intermediate Clerk	379	-0.308	122

In our last step, we duplicated the method of our first analysis but using market derived coefficients (controlling for regional differences) instead of the log of the salary. This re-introduced consideration of race, ethnicity, sex, and job evaluation points. We calculated the effect of these variables on the market coefficient. The job evaluation points were highly related to market coefficients; that is, while there is some variation, as jobs increase in overall levels of effort, skill, responsibility, and working conditions, the market values them more highly and pays them higher wages. However, this assignment of wages is not free from the effects of discrimination; increases in the percentage of Black males and Caucasian females in a job significantly decrease wages, other factors being equal. The percentage of Asian males also has a negative, but not quite statistically significant, effect on wages. (See Appendix 4 for regression details.)

Essentially the same results were obtained from a rather simple analysis of the effect of race/ethnicity and sex on salaries using only job evaluation points as a measure of job worth as were obtained from a highly sophisticated analysis using a measure of market worth as the basis for analysis. Whether one examines wages in the State of Washington with the focus of a social scientist interested in discrimination or with that of an economist interested in market forces, the same conclusion is reached: wages are affected not only by market forces but also by the sex and race/ethnicity of the individuals holding the jobs.

IV. Conclusions

The questions raised in this study extended the concept of pay equity beyond its usual concern with wage differentials affected by sex to wage differentials affected by race/ethnicity. The results present a correspondingly more complex picture in which sex and race/ethnicity have effects on wages.

Two results are of interest in this study: the finding that race/ethnicity as well as sex affect wages and the finding that, regardless of the model used to test for the effect of race/ethnicity, the significant outcomes are the same for all females and Black males: they are paid less for similar jobs even when other factors are accounted for. Femaleness is associated with very strong wage discrimination effects which, for this sample of jobs, overpowers any effects of race and ethnicity within females as a group. Since the effects are greater for total females than for Caucasian females alone we can suspect that women of color fare less well in the labor market than Caucasian females, but the difference is not statistically significant for women of color alone once sex has been taken into account.

The fact that race/ethnicity effects are significant for Black and Asian males and not for Hispanic and Native American males may represent a reflection both of reality and of an artifact of sampling. However, in this sample, jobs which American Indian and Hispanic males are likely to hold are underrepresented. We cannot determine whether this underrepresentation is related to the absence of a significant

finding when individuals of these ethnicities hold these jobs.

The second result of note in this study is that regardless of the method used to test for the effect of race/ethnicity the results for Black males and all females are consistent. We conducted the analysis of the effect of race/ethnicity on wages two different ways: the first followed traditional analyses used in discrimination research that focus on the variables of interest (race/ethnicity and sex) and the second followed economists' assumptions and gave special attention to individual jobs as the unit for analysis. By the second method wage differentials were analyzed to account first for market-based factors, in that analysis job and regional differences overwhelmed sex and race/ethnic differences. Such results would lead most economists to conclude that there is no discrimination in wages; and, satisfied with the effects of the market on wages, they might stop their analysis at this point. We went one step further and re-analyzed the data after adjustments that took into consideration regional differences and differences between jobs--basically, the first analysis was done again but following market economists prescriptions. Even under these conditions the significant results for Black males and all females were duplicated, while the results for Asian males approached statistical significance.

While the above results point to pay equity as a solution to race- and sex-based wage discrimination, the finding that the wage differential is tied to the job category points to a different set of issues: those of job segregation. As long as women and

racial/ethnic minoritiess are recruited for or tracked into only a limited number of jobs, then wage differentials can be attributed to the job. The effect of race/ethnicity and gender would seem to become part of the job itself: some jobs would come to be seen as "Black male jobs" or "female jobs." These jobs would then have associated with them lower salaries than would be predicted from either the job difficulty or underlying market forces. While pay equity addresses issues confronted by job holders, it is not a solution for all problems of job segregation. Affirmative action and other remedies that can be implemented at the level of recruitment and hiring must be brought to bear on discrimination occurring at that level. Just as the causes of discrimination are not simple, the solutions must address the multiple causes of it. Pay equity is one of many tools we must use to eliminate discrimination from the work setting.

APPENDIX 1

REGRESS LOG OF SALARY ON LOG OF POINTS; CONTROL= % WHITE MALE, KING COUNTY

DEP VARIABLE X(26) LSAL R.S.S.= 7.495547 F-VAL= 49.014

D.F.= 304. R2= 0.74373 RBAR2= 0.72856 ST. ERROR= 0.157024

VAR	NAME	COEFFICIENT	ST. ERROR	T-VALUE	PART.CORR.
X(0)	CONSTANT	5.126729	0.131555	38.9702	0.000000
X(27)	LPOINTS	0.504241	0.022670	22.2423	0.787014
X(7)	%WHFEM	-0.411738	0.035774	-11.5095	-0.550910
X(8)	%BLFEM	-0.799231	0.646399	-1.2364	-0.070737
X(9)	%BLMAL	-1.685821	0.647939	-2.6018	-0.147590
X(10)	%ASFEM	0.014164	0.663101	0.0214	0.001225
X(11)	%ASMAL	-1.226498	0.453957	-2.7039	-0.153250
X(12)	%AMFEM	-0.033161	0.539201	-0.0615	-0.003527
X(13)	%AMMAL	0.169005	0.539563	0.3132	0.017962
X(14)	%HIFEM	-0.474220	0.434157	-1.0923	-0.062524
X(15)	%HIMAL	0.053120	0.385043	0.1380	0.007912
X(18)	SOUTHWEST	-0.109117	0.044017	-2.4790	-0.140762
X(19)	TACOMA	-0.038483	0.038433	-1.0013	-0.057335
X(20)	BREMERTON	-0.178709	0.040795	-4.3807	-0.243676
X(21)	EVERETT	-0.107415	0.042956	-2.5006	-0.141965
X(22)	NORTHWEST	-0.137420	0.043477	-3.1607	-0.178374
X(23)	TRI-CITY	-0.098276	0.043616	-2.2532	-0.128164
X(24)	SPOKANE	-0.175129	0.041977	-4.1721	-0.232715
X(25)	YAKIMA	-0.236272	0.047612	-4.8604	-0.268525

APPENDIX 2

LOG SALARY ON %GEND/RACE; CONTROL=WHITE MALE, KING COUNTY, WAREHOUSE WORKER

DEP.VARIABLE X(26) LSAL R.S.S.= 3.765811 F-VAL= 34.345

D.F.= 269. R2= 0.87125 RBAR2= 0.84588 ST.ERROR= 0.118319

VAR	NAME	COEFFICIENT	ST.ERROR	T-VALUE	PART. CORR.
X(0)	CONSTANT	7.397989	0.057912	127.7459	0.000000
X(7)	%WHFEM	0.064115	0.103203	0.6212	0.037851
X(8)	%BLFEM	0.286385	0.561102	0.5104	0.031104
X(9)	%BLMAL	-0.412587	0.544582	-0.7576	-0.046144
X(10)	%ASFEM	0.245609	0.568653	0.4319	0.026325
X(11)	%ASMAL	-0.517898	0.399568	-1.2961	-0.078782
X(12)	%AMFEM	0.134596	0.436202	0.3086	0.018810
X(13)	%AMMAL	0.499133	0.441713	1.1300	0.068734
X(14)	%HIFEM	0.008442	0.363324	0.0232	0.001417
X(15)	%HIMAL	-0.242007	0.318688	-0.7594	-0.046251
X(18)	SOUTHWEST	-0.52982	0.035334	-14994	-0.091043
X(19)	TACOMA	-0.037537	0.029389	-1.2772	-0.077640
X(20)	BREMERTON	-0.156854	0.031881	-4.9200	-0.287330
X(21)	EVERETT	-0.064133	0.034076	-1.8820	-0.114002
X(22)	NORTHWEST	-0.077898	0.034741	-2.2422	-0.135451
X(23)	TRI-CITY	-0.038218	0.035005	-1.0918	-0.066422
X(24)	SPOKANE	-0.124576	0.033578	-3.7101	-0.220633
X(25)	YAKIMA	-0.179640	0.038915	-4.6163	0.270932

APPENDIX 2 (cont'd)

X(28)	FISCAL MGR	0.655811	0.061601	10.6460	0.544457
X(29)	ACCT/AUDTR	0.275414	0.063733	4.3214	0.254783
X(30)	PERS/OFCR	0.534388	0.068460	7.8059	0.429743
X(31)	BUYER	0.341623	0.060894	5.6102	0.323647
X(31)	CIV. ENGR	0.642002	0.060997	10.5251	0.540086
X(33)	SYS ANAL/	0.486218	0.060152	8.0832	0.442067
X(34)	CHEMIST	0.412306	0.066803	6.1720	0.352201
X(35)	REG. NURSE	0.160584	0.098724	1.6266	0.098692
X(36)	PHARMACIST	0.555379	0.061997	8.9582	0.479351
X(37)	PHYS. THER.	0.292110	0.086350	3.3830	0.202011
X(38)	MED.TECH.	0.131549	0.083896	1.5680	0.095168
X(39)	L.P. NURSE	-0.186894	0.098513	-1.8971	-0.114905
X(40)	ELCT.TECH	0.312366	0.058320	5.3560	0.310429
X(41)	DRAFT.TECH	0.190677	0.058385	3.2659	0.195291
X(42)	CV.ENG.TECH.	0.194463	0.059525	3.2669	0.195348
X(43)	DES.PROG	0.302405	0.059422	5.0891	0.296349
X(44)	COMP. OP.	-0.011122	0.076461	-0.1455	-0.00869
X(45)	SECRETARY	-0.174245	0.101146	-1.7227	-0.104461
X(46)	CL TYPE/	-0.269211	0.0099464	-2.7066	-0.162824
X(47)	LIBR.TECH	-0.276716	0.093061	-2.9735	-0.178388
X(48)	BOOKKEEPER	-0.171689	0.097082	-1.7685	-0.107205
X(49)	EMERG.DISP	0.046958	0.060492	0.7763	0.047277
X(50)	INTER.CLERK	0.368644	0.089250	-4.1305	-0.244213
X(51)	DATA ENTRY	-0.273983	0.098777	-2.7738	-0.166751
X(52)	POL.OFCR	0.259285	0.060291	4.3006	0.253635
X(53)	SEC.GUARD	-0.248168	0.058320	-4.2553	-0.251133
X(54)	COOK436	-0.272692	0.071245	-3.8275	-0.227261

APPENDIX 2 (Cont'd)

X(55)	CUSTODIAN	-0.227699	0.056775	-4.0106	-0.237530
X(56)	GARDENER	-0.085817	0.057214	-1.4999	-0.091073
X(57)	HVT.EP.MECH	0.347054	0.058916	5.8907	0.338021
X(58)	MAIN.ELECT	0.417567	0.058963	7.0818	0.396410
X(59)	MAINT.CARP.	0.348927	0.058954	5.9186	0.339439
X(60)	STAT.ENGR	0.340259	0.061169	5.5626	0.321189
X(61)	OFFSET PRES	0.089484	0.056955	1.5711	0.095358
X(62)	DEL.TRUCK	0.119770	0.057566	2.0806	0.125846
X(63)	HVY EQP.OP	0.423322	0.057903	7.3109	0.407138

APPENDIX 3

LOG SALARY ON DUMMY REGION; DUMMY JOB; CONTROL=KING COUNTY, WAREHOUSE WORKER

DEP. VARIABLE X(26) LSAL R.S.S.= 3.835964 F-VAL= 41.857

D.F.= 278. R2= 0.86885 RBAR2= 0.84809 ST.ERROR= 0.117467

VAR	NAME	COEFFICIENT	ST.ERROR	T-VALUE	PART.CORR.
X(0)	CONSTANT	7.383172	0.043199	170.9124	0.000000
X(18)	SOUTHWEST	-0.039789	0.027523	-1.4456	-0.086380
X(19)	TACOMA	-0.031498	0.027523	-1.1444	-0.068478
X(20)	BREMERTON	-0.140760	0.027523	-5.1143	-0.293428
X(21)	EVERETT	-0.048575	0.027749	-1.7505	-0.104413
X(22)	NORTHWEST	-0.066455	0.027523	-2.4145	-0.143319
X(23)	TRI-CITY	-0.026233	0.027746	-0.9455	-0.056616
X(24)	SPOKANE	-0.113696	0.027310	-4.1631	-0.242248
X(25)	YAKIMA	-0.163685	0.027749	-5.8987	-0.333524
X(28)	FISCAL MGR	0.679476	0.055374	12.2706	0.592729
X(29)	ACCT/AUDTR	0.299538	0.055374	5.4093	0.308596
X(30)	PERS.OFCR	0.563289	0.057125	9.8606	0.509041
X(31)	BUYER	0.362307	0.055374	6.5429	0.365296
X(32)	CIV.ENGR	0.634602	0.055374	11.4602	0.566438
X(33)	SYS ANAL/	0.494137	0.057125	8.6501	0.460511
X(34)	CHEMIST	0.404480	0.059304	6.8205	0.378614
X(35)	REG.NURSE	0.230031	0.055374	4.1541	0.241756
X(36)	PHARMACIST	0.571872	0.057127	10.0106	0.514745
X(37)	PHYS.THER.	0.340681	0.057127	5.9636	0.336779
X(38)	MED.TECH	0.186356	0.057125	3.2622	0.192014
X(39)	L.P.NURSE	-0.115705	0.055374	-2.0895	-0.124348
X(40)	ELCT.TECH.	0.301000	0.055374	5.4357	0.309957

X(41) DRAFT.TECH	0.188534	0.055374	3.4047	0.200072

APPENDIX 3 (Cont'd)

X(42) CV.ENG.TECH	0.210603	0.055374	3.8033	0.222392
X(43) DES.PROG.	0.321054	0.055374	5.7979	0.328843
X(44) COMP.OP.	0.035199	0.055374	0.6357	0.038096
X(45) SECRETARY	-0.102968	0.055374	-1.8595	-0.110838
X(46) CLK TYPIST	-0.197581	0.055374	-3.5681	-0.209262
X(47) LIBR.TECH	-0.218003	0.055374	-3.9369	-0.229800
X(48) BOOKKEEPER	-0.105505	0.055374	-1.9053	-0.113534
X(49) EMERG.DISP	0.065146	0.055374	1.1765	0.070834
X(50) INTER.CLERK	-0.307828	0.055374	-5.5590	-0.316292
X(51) DATA ENTRY	-0.199552	0.055374	-3.6037	-0.211257
X(52) POL. OFCR	0.260785	0.057127	4.5650	0.264073
X(53) SEC.GUARD	-0.251313	0.057125	-4.3993	-0.255123
X(54) COOK	-0.244814	0.055374	-4.4211	-0.256301
X(55) CUSTODIAN	-0.226571	0.055374	-4.0916	-0.238328
X(56) GARDENER	-0.088625	0.055374	-1.6005	-0.095551
X(57) HVY.EQ.MECH	0.340733	0.055374	6.1533	0.34623
X(58) MAIN.TECH.	0.413929	0.055374	7.4751	0.409094
X(59) MAINT.CARP	0.351141	0.055374	6.3412	0.355480
X(60) STAT.ENGR	0.334039	0.057127	5.8473	0.330939
X(61) DEL TRUCK	0.119719	0.055374	2.1620	0.128592
X(62) HVY.EQP.OP	0.419658	0.055374	7.5786	0.413793

APPENDIX 4

REG MARKET COEF OF SALARY ON %SEX,RACE; CONTROL= %WHITE MALE

DEP. VARIABLE X(19) COEF R.S.S.= 0.313797 F-VAL= 19.751

D.F.= 25. R2= 0.88765 RBAR2= 0.84270 ST. ERROR= 0.112035

VAR	NAME	COEFFICIENT	ST.ERROR	T-VALUE	PART.CORR.
X(0)	CONSTANT	-2.200988	0.349128	-6.3043	0.000000
X(21)	LPTS	0.503188	0.059997	8.3869	0.858943
X(4)	ASFE	0.006496	0.021667	0.2998	0.059855
X(5)	ASMA	-0.021130	0.016209	-1.3036	-0.252288
X(6)	BLFE	0.010806	0.036372	0.2971	0.059312
X(7)	BLMA	-0.051070	0.027689	-1.8444	-0.346084
X(8)	HIFE	-0.011265	0.044235	-0.2547	-0.050868
X(9)	HIMA	0.021095	0.032470	0.6497	0.128855
X(10)	AMFE	-0.107453	0.115941	-0.9268	-0.182254
X(11)	AMMA	-0.007648	0.036350	-0.2104	-0.042045
X(14)	WHFE	-0.004763	0.002074	-2.2962	-0.417335

Chapter Summary

The Service Employees International Union (SEIU) conducted a study on the Los Angeles County workforce using the County's own employment data from EEO (Equal Employment Opportunity) forms and Affirmative Action reports. This study documented patterns of occupational segregation based on race and sex which perpetuate wage discrimination and concludes that implementation of pay equity would begin to remedy the problem.

SEIU's analysis found that Blacks and White women are represented in the Los Angeles County workforce in percentages greater than their representation in the County as a whole. Hispanics are underrepresented in the County's workforce. However, integration on the surface is countered by segregation in individual job classifications and departments. Of the County's 2,308 permanent job classes, 1,872 are sex-segregated and 495 are race-segregated. Additionally, minorities are concentrated in those departments where upward mobility is limited. For example, people of color hold only 19% of the supervisory positions in the County even though they represent 55% of the workforce.

Education and experience are undervalued in minority-dominated jobs: Blacks and Hispanics make less than Whites in jobs that require comparable education and experience at all levels of County employment. Los Angeles County appears to have two pay policy lines--one for White males and one for minorities and White women. If the jobs where Blacks and Hispanics predominate were paid the same as White male jobs with the same

level of education and experience, the researchers concluded, the average monthly salary of Blacks and Hispanics in Los Angeles County would increase from $1,808 per month to $2,059 per month.

Although Asian employees in the County were not found subject to wage discrimination itself, the study found that they do suffer from other forms of employment discrimination including hiring and promotions.

CHAPTER IV

Race and Sex Discrimination in Los Angeles County Employment Policies

Jean Ross
Assistant Director of Research
Service Employees International Union

RACE AND SEX DISCRIMINATION
IN LOS ANGELES COUNTY
EMPLOYMENT POLICIES

On April 29, 1985, three local affiliates of the Service Employees International Union (SEIU) filed a legal action with the EEOC under Title VII (1) of the Civil Rights Act alleging discrimination on the basis of race, as well as sex. After the EEOC failed to act, charges were filed in California State Courts under the State's Fair Employment and Housing Act against the County of Los Angeles (California) on behalf of over 60,000 workers, over 46,000 of whom are represented by SEIU Locals 434, 660, and 535. The suit claims wide-ranging discrimination, not only in wages, but in job assignments and promotional opportunities as well. The size and the racial and ethnic diversity of Los Angeles County make it a good case study in the use of the theory of pay equity as the basis of alleging race and sex discrimination.

A study of the workforce, undertaken by the union, documented patterns of severe segregation on the basis of race and sex which allow for the perpetuation of wage discrimination. The analysis was completed using the County's own employment data drawn from Equal Employment Opportunity forms, Affirmative Action reports, and PE 30 forms. (2)

On the basis of the analysis, the union defined job classifications with 70% Black and Hispanic incumbents as

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(1) Title VII prohibits discrimination in employment based on race, sex, color, religion or national origin.

(2) PE 30 forms are internal County documents used to record the sex, race and ethnicity of employees.

"minority dominated." Asian employees, 9.4% (3) of the County workforce, were not found subject to wage discrimination per se. However, Asian employees do suffer from other forms of employment discrimination, including the areas of hiring and promotions.

The union chose to define the issue of pay equity broadly, considering any employment practice which resulted in a sex- or race-based wage differential as related to pay equity. Much of the motivation for this broad interpretation came from the workers themselves. While wage discrimination is definitely perceived as a major issue for County employees, occupational and departmental segregation and promotional and hiring practices are also seen as having a discriminatory impact on women and minority employees. Therefore, a wider range of employment practices are considered as part of this report and are included as charges in the lawsuit against the County. The decision to define pay equity broadly also stems from both the lack of data (such as that from a job evaluation study) that allows for direct assessments of "comparability," as well as an understanding that only part of the wage gap could be explained by factors considered in traditional pay equity analysis.

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(3) 1984 EEO-4 Form.

Segregation of the Los Angeles County Workforce

Los Angeles County is one of the largest employers in the State (the largest in the area). As Table 1 shows, Blacks and women are represented in the County workforce in percentages greater than their representation in the population as a whole.

Table 1

Distribution of L.A. County Workforce (1984)

Population Group	Number	Percentage	LA County Population
Total	60,801	100%	
White Men	15,886	26.1	33.0
White Women	11,289	18.6	26.1
Black Men	6,175	10.2	6.0
Black Women	12,373	20.3	6.6
Hispanic Men	4,059	6.7	13.8
Hispanic Women	5,727	9.4	13.8
Other	5,291	8.7	7.7
Total Women	32,581	53.6	51.2
Total Men	28,220	46.4	48.8

Source: L.A. County form PE-30, full-time, permanent employees. 1980 Census of the Population, Characteristics of the Population.

Hispanics are underrepresented in the County workforce, a long-standing concern of both the union and civil rights organizations. Moreover, the extent to which Hispanics are underrepresented may be much larger than census figures disclose. Hispanics constitute as much as 31% of L.A. County's population, according to County demographics experts. (4)

(4) "L.A. County's Population is Soaring Again," Los Angeles Times, Feb. 18, 1986, p.1.

However, integration on the surface is countered by segregation at the level of individual job classification and departments. Fully 1,872 out of the County's 2,308 permanent job classes are sex-segregated and 495 race-segregated (Table 2). (5)

Table 2

Sex Segregation of Workforce
Los Angeles County

Sex Dominated	# People	# Jobs	Average Yearly Salary
70% or more Female	29,251	650	$16,428
80% or more Female	25,975	588	$16,416
70% or more Male	22,820	1222	$23,172
80% or more Male	18,143	1145	$24,686
50% or more White Male	10,082	790	$24,216
50% or more Black	13,360	528	$14,868
70% or more Black and Hispanic	11,598	495	$14,304
70% or more White	12,449	753	$23,688

In Los Angeles County, job segregation and wage discrimination go hand-in-hand. Both minority and women employees are concentrated in a relatively small number of County jobs. (Table 2) Segregation further divides the workforce by department and agency within the County. Movement in the form of transfer or promotion between departments is infrequent. Thus,

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(5) Sex-segregated job classifications are defined throughout as those with 70% or more jobholders of the same sex. Minority-dominated jobs are defined as those where Black and Hispanic workers constitute 70% or more of jobholders.

initial assignment is an important determinant of an individual's career potential within County employment. Minority workers are most prevalent in departments where upward mobility is limited either by the occupational structure or by barriers presented by educational or licensing requirements for higher level positions, such as in the health professions (Table 3). Blacks, for example, fill over 50% of entry-level attendant positions for hospitals, while filling only 26.7% of nursing and 11.4% of physician positions in the County health care system.

Table 3

Los Angeles County Employment by Function

	Percent			
	Black	Hispanic	Asian	White
Financial Administration	35.25	14.88	9.17	40.70
Streets & Highways	14.36	26.44	8.66	50.53
Public Welfare	41.25	18.86	8.71	31.18
Police Protection	16.07	13.44	3.02	67.47
Fire Protection	5.81	10.50	1.21	82.49
Natural Resources	18.23	19.90	7.04	54.82
Hospitals & Sanitariums	38.98	15.66	15.15	30.22
Health	31.83	27.05	11.38	29.74
Community Development	18.79	10.74	8.72	61.75
Corrections	42.30	11.53	3.25	42.92
Utilities and Transportation	20.00	11.18	4.71	64.11
Sanitation & Sewage	44.80	16.00	3.20	36.00
All Other	21.14	13.56	12.07	53.23
Total	30.51	16.10	10.67	44.69

Note: Reporting is by EEO-4 categories, some categories may include more than one department.

Source: Los Angeles County EEO-Report, 1984

Segregation of minority and women employees into the lowest wage occupations occurs, even controlling for education and experience requirements (Table 4). Minority-dominated jobs pay far less for the equivalent combination of education and experience than White male-dominated jobs at all levels of educational attainment.

Table 4

Wage Discrimination Among Equal Education/Experience Groups

Education/Experience	Female (70%+)	Male (70%+)	Black (50%+)	Black/ Hispanic (70%)	White (70%+)
A. No education/one year or less exp.	$998	$1,106	$1,014	$1,032	$1,337
B. High school/one year or less exp.	1,292	1,600	1,184	1,172	1,845
C. One year Vocational training/one year or less experience.	1,043	1,594	1,021	1,009	1,739
D. Two years Vocational training/one year or less experience.	1,430	1,649	1,354	1,388	1,651
E. One-Two years college/ one yr. or less exp.	1,181	1,225	1,243	1,221	1,594
F. A.D. (Jr. College degree) one year or less experience.	1,352	1,627	1,361	*	1,618
G. Voc. License, Trade/ one yr. or less exp.	1,284	2,606	1,323	1,441	2,772
H. BA degree/one year or less exper. **	1,785	1,932	1,702	*	1,829
I. Masters Degree, no experience.	1,693	2,570	*	*	*

*Indicates too few jobs in group to calculate a weighted average monthly salary for the segregated class.

** College Degree Jobs: The County classification system currently provides few entry-level jobs requiring only a college degree. Of the 11,802 people working in jobs requiring college, only 3,222 worked in jobs requiring one year or less experience. Most college degree jobs required at least two years of experience at entry level. Therefore, college degree jobs requiring 0 to 3 years were analyzed to look for pay discrimination.

The highest levels of County management are almost exclusively a White male domain (Table 5). Only 9% of executive managers, the policy setters for the County, are women, and only 19% are minority as compared to 54% women and 55% minorities in the workforce overall.

Table 5

Promotional Discrimination

Proportion Workforce Total	White	People of Color	Male	Female	#People
Total Workforce	45%	55%	46%	54%	60,000
Exec. Management	81%	19%	91%	9%	166
Management	65%	35%	70%	30%	1,552
Sup. Professional	51%	49%	42%	59%	1,706
Professional	54%	46%	39%	61%	8,153
Sup. Admin.	62%	38%	70%	30%	677
Admin. Staff	49%	51%	48%	52%	2,115
Sup. Protectice/Services	86%	14%	95%	5%	1,942
Protectice Services	69%	31%	14%	86%	18,146
Sup. Clerical	32%	68%	20%	80%	2,296
Clerical	32%	68%	14%	86%	18,146
Sub.para-professional	51%	49%	65%	35%	714
Para-professional	41%	59%	50%	50%	5,149
Sup. General Services	35%	65%	85%	15%	638
General Services	19%	81%	55%	45%	5,973
Sup. technical	57%	43%	86%	13%	129
Technical	57%	43%	62%	37%	743
Sup. Craft	70%	30%	99%	1%	213
Craft	59%	41%	99%	1%	1,256
Sup. Operatives	39%	61%	79%	21%	23
Operatives	33%	67%	82%	17%	728

In every job category, there is a significant drop in the proportion of minority supervisory employees. Recently, two Asian Sanitarians successfully challenged the County for discrimination in promotions. (6) A grievance filed on behalf of the Sanitarians charged that while Asians make up about 15% of the Environmental Division of the County Health Services Department, only 1 out of 30 Chief Sanitarians is of Asian heritage and there are no Asian employees in management positions. Other successful actions against the County include a grievance filed by female attorneys in the District Attorneys Office, also charging discrimination in promotions. These cases were resolved through the county's internal dispute resolution process.

For many employees, movement into supervisory positions does not bring a commensurate increase in pay. In the clerical series, a Supervising Clerk receives the same monthly salary rate as a Senior Clerk with no supervisory responsibility. (Table 6). Similarly, specialized clerical positions, such as Payroll or Probate Clerks, receive no added differential for skill. Minority women are disproportionately found in these positions. White male employees, on the other hand, are more prevalent in specialized professional or technical positions and the uniformed services where supervisory duties are much more highly compensated (Table 7).

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(6) Asian Weekly February 22, 1985.

Table 6

Comparison of Definition and Requirement for Supervising and Senior Clerk

	Definition	Requirements
Supervising Clerk	"Supervises, for a substantial portion of his (sic) time, generalized and specialized officer clerical work May supervise 10 or more employees."	Two years' office clerical experience, one year of which must have been in a specialized capacity.
Senior Clerk	"Performs highly specialized clerical duties requiring a highly specialized knowledge of a particular function with a responsibility for applying proper procedures and for carrying out the work with only general direction."	Three years' office clerical experience.

Table 7

Compensation for Supervisory Duties

	Percent Female	Percent Minority	Monthly Salary	Percent Gap
Clinic Nurse II	92	46	$ 1812	4.2
Supervising Clinic Nurse I	95	47	1891	
Senior Medical Records Technician	94	58	1373	5.4
Supervising Medical Records Technician I	100	75	1451	
Agricultural Inspector III	10	3	2037	16.3
Supervising Agricultural Inspector	0	0	2433	
Senior Laundry Worker	46	61	1030	24.4
Laundry Supervisor I	11	33	1363	
Deputy Probation Officer II	27	38.8	1924	39.0
Assistant Probation Director	14	8	2675	

Source: Los Angeles County PE-30, March 1984

Sex segregation is deeply rooted in County employment practices. Los Angeles County used sex restricted job openings as recently as 1972. This practice was eliminated when Title VII was extended to cover public employees in that year. However, 94.4% of the employees in the 80 jobs identified as restricted to males at that time remain male. (7) Almost all of the women in these jobs are in two classes, both among the lowest paid of all County jobs--Public Guard Assistant and Institutional Helper.

Crowding of Minorities and Women into a Limited Number of Jobs

Sex-segregated jobs include most of the County's largest and most widespread occupations. Seventy-nine percent of the County's more than 32,000 female employees work in female-dominated jobs (Table 2). For male employees the comparable figure is less, closer to two-thirds. Only 650 County jobs meet the definition of female-dominated versus 1,222 male-dominated positions. (8) Nearly half of the County's Black employees are in jobs filled with a disproportionately high number of Blacks.(9)

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(7) 1984 Los Angeles County PE-30 forms.

(8) Out of a total of 2,308 County jobs.

(9) Defined as greater than 50%.

Crowding has the effect of discounting the specialized skills and duties of many County employees. At the extreme, 3,921 employees work as Intermediate Typist Clerks (ITC), 95% of them women. The ITC classification is used to perform duties ranging from traditional office clerks to primarily medical functions, such as Unit Clerks, in County hospitals and para-professional social service duties in the Department of Social Services. Creation of overly broad classifications, coupled with truncated wage structures, effectively traps women and minority workers in low-wage job ghettos.

At the other extreme is the use of highly specialized one-person jobs. Union officials strongly suspect that these positions are designed to reward a favored incumbent, most often White and male (Table 8). Creation of specialized positions offers a way to increase salaries and mobility for workers in male-dominated job families.

Table 8

Distribution and Salary of One-Person Jobs

Population Group	Average Salary	Number One Person Jobs	% of Total
Total	$2,570	768	100.0
Male	2,600	539	70.2
Female	2,108	229	29.8
White Male	2,877	352	45.8
White Female	2,371	119	15.5
Black Male	1,999	100	13.0
Black Female	1,842	72	9.4
Hispanic Male	2,279	52	6.8
Hispanic Female	1,792	17	2.2

Source: L.A. County Form PE-30, full-time, permanent employees.

White male incumbents in one-person jobs earn far more than White male employees overall ($34,524 versus $24,216) and over twice the annual salary of workers in predominantly female one-person jobs ($16,428) and Black and Hispanic dominated one-person jobs ($14,304). The wage gap between White male jobs and Black and Hispanic single incumbent jobs ranges between a low of 20.8% for Hispanic men and a high of 37.7% for Hispanic women.

Discrimination in Comparable Positions

In the face of no formal job evaluation of County positions, two proxy studies were performed to estimate the wage gap between positions of similar skill, effort, responsibility and working conditions. The first is the already mentioned comparison of wages for positions with similar minimum education and experience requirements. The second, a "piggyback" job evaluation, was done by matching Los Angeles County job descriptions to those in Guidebooks prepared by the State of Minnesota's Department of Employee Relations. (10) Point scores for Minnesota positions were then attributed to the comparable Los Angeles County job.

The first study looked only at jobs with minimal experience requirements to focus on factors reflecting little specialized knowledge or skills (Table 4). Jobs used in this analysis, with

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(10) A Guide to Implementing Pay Equity in Local Government with Supplements for Cities and Counties, Minnesota Department of Employee Relations. August, 1984.

the exceptions noted, all required the stated level of education and one year or less of experience. Particularly at the highest levels, the return on additional education is substantially less for workers in Black and Hispanic-dominated jobs (Figure 1). The pay gap between White and minority-dominated jobs ranges from $48 to $13,900 annually for categories with the same educational requirements.

Regression analysis of education/experience requirements versus salary also confirms that the County pays more for education and experience in White and male jobs than for minority- or female-dominated jobs within the same category of requirements.(11) The average monthly salary for a minority-dominated job would be $1,808.77 if paid by the Black/Hispanic pay practice line. The same position would receive $2,059.48 if paid by the White pay practice line, amounting to a $3,009 annual wage gap. The annual gap between male and female jobs calculated using the same methodology would be $6,210.

A close match was made between 77 Los Angeles County and Minnesota jobs in the piggyback study. These jobs employ 33.5% of all County workers. The piggyback study involved matching Los Angeles County job descriptions with capsule summaries from the Minnesota Guidebooks. Job scores from the Minnesota Hay Study

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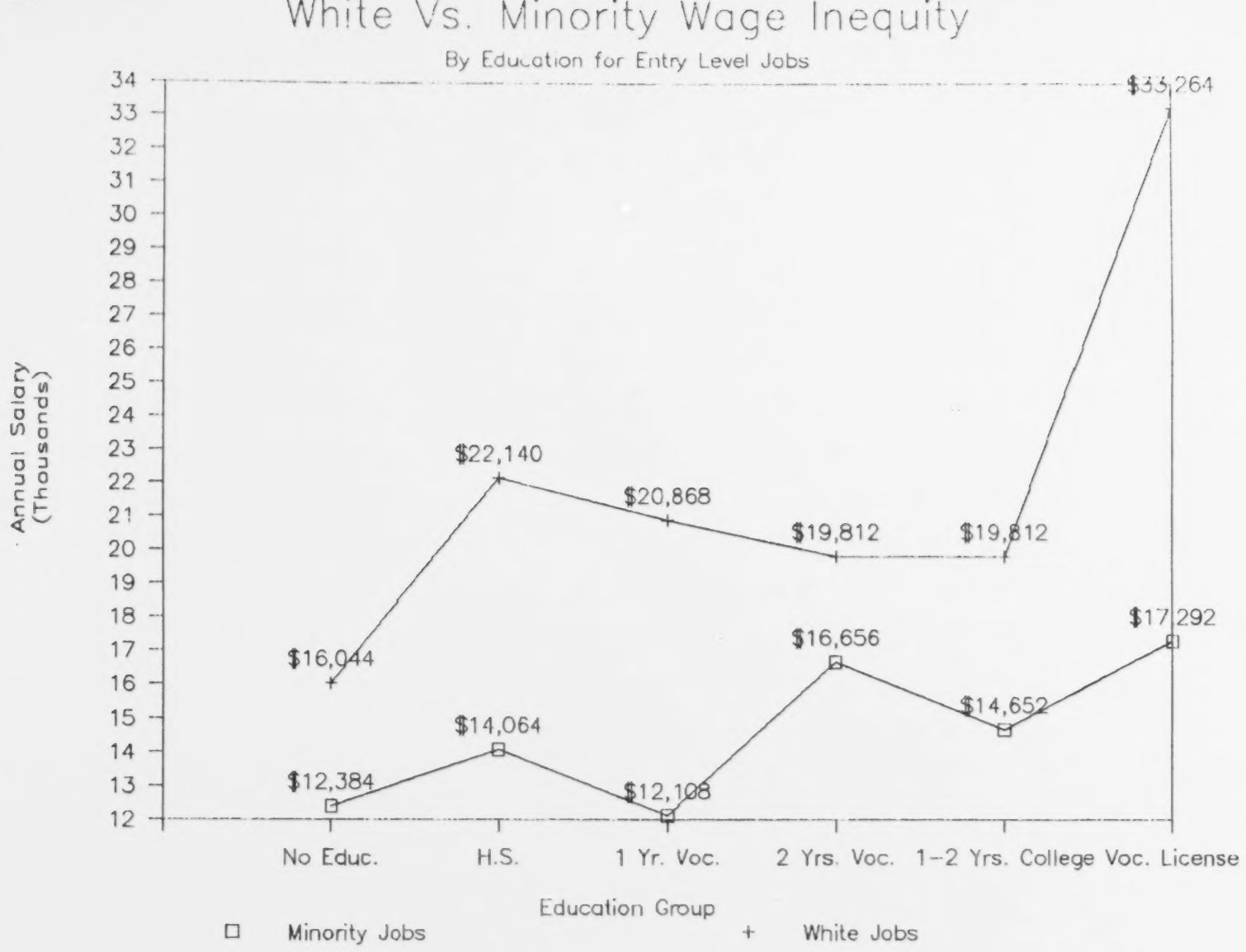
(11) This analysis rated education on a simple ordinal scale. All results were significant at the .01 level. Appendix 1 documents the coding system used.

Figure 1


White Vs. Minority Wage Inequity
By Education for Entry Level Jobs
Annual Salary (Thousands)
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
$33,264
$22,140
$20,868
$19,812
$19,812
$16,044
$17,292
$16,656
$14,652
$14,064
$12,384
$12,108
No Educ.
H.S.
1 Yr. Voc.
2 Yrs. Voc.
1-2 Yrs. College
Voc. License
Education Group
Minority Jobs
White Jobs

were then attributed to the matched positions to simulate a job evaluation study. Regression analysis was used to measure the relationship between job scores, percent Black and Hispanic, percent female, and minimum monthly salary. This technique discloses the amount of variation in wages that is attributable to the race or sex composition of a job.

The results of the job match show that for every one percent female, a job loses $4.45 per month in salary. For each increased percent Black and Hispanic, a job loses $3.90. The percent of Black and Hispanic workers in a job title has a strong and negative correlation with monthly salary. (See Appendix 2).

The correlation between race and salary is not as statistically significant or as large as that between sex and salary. However, it is greater than that found in other jurisdictions. (12) The extent of the wage gap is particularly significant in light of the degree of occupational segregation.

Another practice resulting in wage differentials between predominantly male and female jobs or White and minority jobs is the wage differential between jobs with very similar duties and requirements. Initial research located several such clusters. One example is the Children's Services Worker (CSW) and Deputy Probation Officer job series. Both groups have the power to take individuals into custody, maintain caseloads of clients, and similar levels of administrative responsibility. Entrance

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(12) See in this volume "Minorities and Pay Equity in New York State Government Employment," Center for Women in Government, 1986.

requirements for Children's Services Worker positions include a Master's degree at all but the lowest level (CSW I), while Deputy Probation Officer positions require only a Bachelor's degree for all but the most specialized duties. An added hazard faced by CSWs is the responsibility to enter potentially hostile situations in the field with no other assistance, while Deputy Probation Officer is an almost exclusively desk-bound position. The wage differential between equivalent steps in these series is 8.6%. The Children's Services Workers series is predominantly female, with substantial numbers of Blacks and Hispanics. The Deputy Probation Officer series is predominantly White and male.

The Effect of Declining Employment

Los Angeles County employment declined by 8,922 between 1973 and 1984. Most of the cuts came in the late 1970's, as a result of California's Proposition 13 limiting County revenues, and in the 1980's, stemming from decreasing federal aid to local governments. Contracting out County services to the private sector has also played a major role in some departments, including those with a disproportionately high number of Black employees. Since minority, and in particular Hispanic, workers entered County employment more recently than many White employees, layoffs have hit these groups disproportionately hard. In the area of Financial Administration, for example, total employment declined by 29.6% between 1983 and 1984. Hispanic male employment fell by 43.4% and Hispanic female employment by

45.5%. (13) Hispanic male employment decreased by a greater percent than total employment in 9 out of the 13 EEO-4 reporting categories, and Hispanic female employment, in 7 out of 13. Black employees suffered less as a result of layoffs, due primarily to longer average tenure with the County.

The County has coped with decreasing numbers of permanent full-time employees by increasing the number of part-time and temporary workers. Temporary workers are often kept on the County payroll for a number of years, yet receive no fringe benefits while completing the same work as the permanent employees. In virtually every department, minority group members are more likely to be employed as part-time or temporary employees than Whites. Women are also disproportionately represented in the temporary workforce. With the dollar value of fringe benefits amounting to 30% or more of wage costs, the County's practice of concentrating minority and women workers in part-time and temporary positions constitutes a hidden, but significant, wage gap.

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(13) Full-time permanent employment as stated on 1984 and 1983 Los Angeles County EEO-4 reports.

Conclusion

Discrimination against minority and female Los Angeles County employees is widespread and deeply rooted. In 1985, County employees attempted to negotiate a job evaluation study to identify and remedy wage inequities. The County refused. SEIU is continuing to pursue legal action against the County for discrimination on the basis of race and sex in wages, promotions, and hiring. The analysis performed to date is limited primarily by our lack of access to County employment records.

The information that we do have, however, shows the amount of segregation and undervaluation of predominantly Black, Hispanic, and female jobs that exists in the County. Of the County's 2,308 permanent job classes, 1,872 are sex-segregated and 495 are race-segregated. Black and Hispanic women are in jobs like Medical Records Technician, Intermediate Clerk Typist, Nursing Attendant II, and Sr. Lab Assistant. Black and Hispanic men, by and large, are in jobs like Custodian, Grounds Maintenance Worker, and Security Officer. Since movement between departments is infrequent, initial placement is an important determinant of career potential within the County. Blacks and Hispanics predominate in the departments of Public Welfare (60%), Health (59%), Sanitation and Sewage (61%), and Corrections (54%), where upward mobility is limited by occupational structures and licensing requirements.

Minority-dominated jobs also pay less for education and experience than White-dominated jobs. For example, Blacks with a B.A. degree and one year of experience make less ($1,702/month) than Whites with a high school diploma and one year of

experience ($1,845/month). Even with the same level of education and experience, Blacks and Hispanics make less than Whites with comparable backgrounds at all levels. The average monthly salary of Blacks and Hispanics paid by the Black/Hispanic pay line is $1,808 while, if they were paid by the White pay line for the same level of education and experience, they would receive $2,059.

The "job match" also reveals that Blacks and Hispanics lose $3.90 per month for every percent minority in the job title. Women in predominantly female jobs lose $4.45 per month for each percent female in the job title.

Promotional discrimination is another major problem for minorities in Los Angeles County. For example, minorities make up 55% of the County's workforce but are in only 19% of supervisory positions. Other County employment practices, which include the creation of one-person job categories and increasing reliance on temporary workers, exacerbate the problem of occupational segregation and wage discrimination for Blacks, Hispanics, and White women in Los Angeles County.

Understanding the extent to which discrimination has depressed the wages of minority and women workers is the first step towards eliminating this disparity. By focusing attention on the dual problems of segregation and wage discrimination, we can begin to negotiate over the elimination of bias in wages, in hiring, and in promotional opportunities. Implementation of pay equity would reduce the wage gap in Los Angeles County and would be a beginning in addressing these problems.

Appendix 1

Education and Experience Coding Scale

Education

0	None
1	High School
2	One year vocational training
3	Up to two years vocational training
4	One to two years college without degree
5	Associate (2 year) degree
6	Vocational training with license or certificate
7	Bachelor's degree
8	Master's degree
9	PhD, JD, MD

Experience

0	None
1	One to eleven months
2	2 years
3	3 years
4	4 years
5	5 years
6	6 years
7	7 years
8	8 years
9	9 years

Appendix 2

Table 9

Minnesota Job Match Regression Results

Jobs Matched: 77

Employees Covered: 20,370

Dependent Variable: Minimum Monthly Salary

Independent Variables:

	Coefficient	Significance Level
Minnesota Job Score	3,8814	.000
Percent Female	-4.4501	.000
Percent Black & Hispanic	-3.9013	.073

Corrected Correlation Coefficient: 0.8415
Significance: 0.0000

Significant at the .07 level. Thirty-one Black and Hispanic dominated (%Black and Hispanic greater than 50%) jobs were included in the match, employing 12,017 County workers. Sixteen of these positions were male-dominated (greater than 70%) and 16 female-dominated (greater than 70%).

CHAPTER V

Findings and Recommendations

CONCLUSIONS

It is essential that employers make clear what they value and consistently pay each occupation accordingly as the first step in achieving pay equity. This report clearly demonstrates that pay equity is necessary for people of color because employers are not paying all workers according to the skill, effort, responsibility, and working conditions of their jobs. Instead, they are basing their pay, in part, on the race/ethnicity and sex of the workers.

Several overall conclusions about occupational segregation and the impact of pay equity on people of color are evident from this study. First, the U.S. workforce is segregated by race, ethnicity and sex. People of color are segregated into a small number of low-paying occupations. The majority of women of color are in predominantly female occupations: Black, Hispanic, Asian, and Native American women work in occupations where on the average, 67% of the workers are women. While women of color and White women work in the same occupational categories, women of color are further segregated within those categories. Black and Native American women are primarily in service occupations; Hispanic women are disproportionately machine operators; Asian women are primarily in service and technical occupations.

The list of the actual jobs that women and men of color perform provided in Chapter I, illustrates the occupational segregation by race and sex in the U.S. workforce. In the 1980 U.S. Census, the three jobs with the highest percent concentration of Black women were private household workers,

cooks, and housekeepers. Hispanic women were most concentrated as graders and agricultural workers, housekeepers, and sewing machine operators. Asian women were disproportionately marine life workers, electrical assemblers, and dressmakers. Native American women were overrepresented as welfare aides, child care workers, and teacher's aides.

Men of color diverge sharply from White men and all women. Black, Latino, and Native American men are concentrated in some of the lowest-paid blue-collar occupations. Latinos, for example, are 16% of farmworkers, 11.8% of groundskeepers, and 10.3% of various laborers. Blacks are 30.4% of garbage collectors, 14% of janitors, and 12-14% of various laborers. Native Americans are concentrated in outdoor laboring occupations. They are 4.0% of marine life workers, 3.5% of forestry occupations, 2.9% of fishing occupations, 1.8% of logging occupations, and 1.0% of various construction occupations. These occupational distributions contrast with those of White males who are found in highly paid professional occupations and as supervisors in well-paid blue-collar positions. They are, for example, 95.5% of airplane pilots, 88-94% of various engineers, 93.9% of firefighters, 93.7% of electricians, and 93.6% of plumbers.

Asian men have high concentrations in both the high-paying occupations and the low-paying ones. Their historical immigration patterns and the diversity of groups which are categorized as Asian may explain this distribution in the labor force. Twenty-one of the top forty occupations with the highest concentration of Asians are scientific and

the highest concentration of Asians are scientific and professional positions; for example 3.5%-7.4% of various engineering classifications and 7.3% of physicians are Asians. On the other hand, eight of these forty are service jobs such as cooks (4.6%), porters (4.7%), and groundskeepers (2.8%).

Women of color suffer the burden of double discrimination because of the role race, ethnicity and sex play in wage setting systems. In general, the higher the percentage of women of color in an occupation, the closer the occupation is to the bottom of the earnings ladder. The average earnings for maids, child care workers, and food preparation workers--all occupations with a high concentration of women of color--were below $8,000 in 1980. Calculations of job value based on the average training and experience of workers, using 1980 Census data, shows that jobs with high concentrations of women of color are among the twenty-five most underpaid of all the 503 occupations listed in the Census.

Occupations with a disproportionate representation of people of color are paid less than predominantly White male occupations of comparable value to the employer. The New York State job evaluation study, for example, makes clear that the State has one pay practice line for disproportionately Black and Hispanic jobs and another for White male jobs. Education and experience are more heavily weighted in setting wages for jobs where Blacks and Hispanics predominate than in White male jobs. In fact, the relative value of all job content factors except "managerial/supervisory responsibilities" is different for White male and minority-dominated positions in that State.

Likewise, in Los Angeles County, Blacks and Hispanics with similar education and experience earn less than Whites with comparable backgrounds at all levels. The average monthly salary of Blacks and Hispanics, now at $1,808, would increase to $2,059, if paid they were paid according to the White male pay line.

Opponents of pay equity claim that people of color and White women earn less than White men because they have less education and experience. Yet this study shows that even when education and experience are held constant, there is a discrepancy. People of color and White women are not rewarded in the same manner as White men are rewarded. If everyone were compensated for education and experience in the same degree as White men, the average earnings for each race/sex group would increase. (White men would benefit if they are in female- or minority-dominated jobs.)

The data from New York, Washington and Los Angeles County strongly suggest that race, ethnicity and sex are factors in the setting of wages. In Washington State, for example, the most undervalued jobs were held by Black males and all females, regardless of the region in the State or job content characteristics of the job. Therefore, in addition to making sure that they follow their evaluation systems in setting wages, employers also need to examine their systems to determine if the values themselves are discriminatory. The New York State data indicates that while White men are being compensated for job content factors, Blacks and Hispanics are not. Blacks and Hispanics are disproportinately represented in occupations which

and working with difficult clients and machines. The current compensation system does not value these job content factors.

Pay equity would benefit men and women of color by eliminating differences in wages which are due to the race, ethnicity, and sex of the workers. In fact the benefits are relatively greater for women of color than for White women. Men of color would benefit from pay equity in two ways: direct increases for themselves and increased family incomes from increases to women of color.

ACHIEVING PAY EQUITY AND ELIMINATING THE WAGE GAP

Any time an employer's workforce is occupationally segregated, employers and employees should examine the compensation system used in their workplace to determine if it contains biases based on race,ethnicity and sex. Once identified, these biases should be corrected by paying all workers fairly for their work. Salaries should be based on the skill, effort, responsibility, and working conditions required for the job--not the race or sex of the workers.

Pay equity is increasingly becoming a priority on the employment agenda of Black, Hispanic, Asian, and Native American workers. Civil rights organizations should encourage this growing intiative.

Women's organizations, labor, and civil rights groups need to further strengthen their ties on the issue of pay equity. These groups are natural allies on this issue and should work closely to avoid the "divide and conquer" tactics of pay equity

opponents. The National Committee on Pay Equity (NCPE) began this process of coalition-building in 1979. However, there is still work that needs to be done in this area.

Voluntary compliance is the most desirable means of achieving pay equity, however, on occasion other means are necessary. If employers refuse to examine their compensation systems for biases, employees have the option of conducting their own study. The results of these studies can be used to persuade employers to cooperate in correcting the inequities in their systems. Or they can become the basis for suing an employer for wage discrimination under Title VII of the Civil Rights Act of 1964 or state fair employment laws.

While pay equity is important for people of color, NCPE stresses that this alone will not solve the other forms of discrimination which people of color encounter in the workplace. Other strategies are necessary to achieve fairness in the labor market. NCPE recommends increased educational opportunities, job training, and agressive affirmative action to fight the occupational segregation which has been caused by a denial of access for people of color to many higher paying occupations.

Contact NCPE for additional information about sex- and race-based wage discrimination and pay equity.

ADDITIONAL COPIES OF THIS REPORT ARE AVAILABLE FOR $9.95 (members), $14.95(non-members).

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